

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

IN THE MATTER OF:

Application of SIERRA PACIFIC POWER
COMPANY d/b/a NV Energy Seeking
Acceptance of its Triennial Integrated
Resource Plan covering the period 2011-2030,
Approval of its Energy Supply Plan for the
period 2011 – 2013, and Approval of the sale
of California Assets.

Docket No. 10-070____

VOLUME 4 OF 22

**LOAD FORECAST AND MARKET FUNDAMENTALS
AND
TECHNICAL APPENDIX**

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Narrative

REDACTED PUBLIC VERSION

REDACTED¹

**SIERRA PACIFIC POWER COMPANY d/b/a NV ENERGY
INTEGRATED RESOURCE PLAN
2011 - 2030**

LOAD FORECAST AND MARKET FUNDAMENTALS

¹ The confidential material is filed under seal.

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SECTION 1 – LONG-TERM LOAD FORECAST

Sierra Pacific Power Company d/b/a NV Energy (“Sierra”) has prepared an updated load forecast for this 2011-2030 Integrated Resource Plan (“IRP forecast”). The starting point for the updated forecast was the load forecast used in Sierra’s Eighth Amendment to the 2007-2026 IRP (Docket No. 10-03023) (“8th Amendment forecast”). The IRP forecast is presented and described below.

A. SUMMARY OF FORECAST RESULTS

Historical Data. Even with the exit of several large mines from Sierra’s system,² from 1998 until 2008, Sierra’s weather normalized system peak demand increased from 1,425 MW in 1998 to 1,674 MW in 2008, an average of 1.6 percent per year. Over that same period, the number of residential customers grew on average 2.3 percent per year.

Beginning in 2008 and continuing into 2009, electric demand in Sierra’s system declined due to the down turn in the economy. In 2009, Sierra’s residential customer base actually declined by 0.1 percent. Residential weather normalized sales declined by 0.9%, Small C&I weather normalized sales declined by 3.5%, and total weather normalized sales fell 5.5% from 2008 to 2009. The recorded summer peak declined from 1,664 MW to 1,554 MW (-5.7%) and from 1,674 MW to 1,566 MW (-6.5%) weather adjusted. Excluding Barrick’s Cortez mine, which exited the system in late 2008, total weather adjusted sales fell 3.4%.

Figure LF-1 shows weather normalized historical peak demand and energy from 1998 through 2009. Significant economic variables that impact the forecast – including population, employment and output trends, and conditions in the mining industry – are discussed below.

² During this period, Sierra experienced modest growth in the Residential and Small Commercial and Industrial (“Small C&I”) classes and negative growth in the Large Commercial and Industrial class (“Large C&I”) due to several large mines exiting the system under AB661.

**FIGURE LF 1
HISTORICAL PEAKS, SALES, LOSSES AND COMPANY USE**

Year	Coincident Peak Demand (MW) Weather Normalized				Year	Annual Sales (MWH) As Billed		Annual Sales (MWH) Weather Normalized		Estimated Losses (MWH)	Company Use (MWH)
	Winter		Summer								
	(Dec - Feb)	% Grwth	(Jun - Sep)	% Grwth							
1998	1,303		1,425		1998	8,307,513		8,256,837		574,911	17,396
1999	1,354	3.9%	1,457	2.2%	1999	8,482,982	2.1%	8,510,090	3.1%	585,601	15,911
2000	1,355	0.1%	1,539	5.6%	2000	8,761,497	3.3%	8,771,978	3.1%	666,607	17,603
2001	1,375	1.5%	1,568	1.9%	2001	8,761,955	0.0%	8,741,683	-0.3%	700,039	18,051
2002	1,359	-1.2%	1,524	-2.8%	2002	8,656,767	-1.2%	8,619,978	-1.4%	574,257	18,051
2003	1,316	-3.2%	1,584	3.9%	2003	8,973,487	3.7%	8,911,177	3.4%	518,388	18,051
2004	1,425	8.3%	1,625	2.6%	2004	9,101,395	1.4%	9,086,191	2.0%	609,323	37,745
2005	1,394	-2.2%	1,699	4.6%	2005	9,233,486	1.5%	9,185,855	1.1%	427,609	37,385
2006	1,295	-7.1%	1,657	-2.5%	2006	8,674,828	-6.1%	8,607,395	-6.3%	524,390	30,077
2007	1,416	9.3%	1,677	1.2%	2007	8,797,641	1.4%	8,699,657	1.1%	601,739	38,364
2008	1,356	-4.2%	1,674	-0.2%	2008	8,655,327	-1.6%	8,584,735	-1.3%	495,836	66,265
2009	1,301	-4.1%	1,566	-6.5%	2009	8,158,502	-5.7%	8,111,698	-5.5%	451,512	45,633

Sales and customer count are projected to remain flat through 2010. Population and economic growth are expected to begin to improve in 2011, but long term growth will average only 0.7% from 2010 through 2020.

Population Growth. According to the population forecast released by IHS/Global Insight (“GI”) in mid-February 2010, the population of the Reno-Sparks Metropolitan Statistical Area (“Reno MSA”) grew by 0.7 percent for 2009 over 2008. GI projects that population in the Reno MSA will grow 0.7 percent from 2009 to 2010 and will increase incrementally by 0.2 percent reaching a growth rate of 1.7 percent for 2014 to 2015. However, given the actual decline in residential customer growth of 0.1 percent from 2008 to 2009 and near flat growth through the first quarter of 2010, GI’s projected near term growth rate for 2010 appears high.

The Nevada State Demographer issued an updated forecast in January 2010.³ This forecast estimated that the population in Washoe County had decreased by 1.8 percent from 2008 to 2009, and projected a further reduction in population from 2009 to 2010 of 0.9 percent. However, these population loss percentages appear high given Sierra’s actual 0.1 percent decline in residential customers from 2008 to 2009 and near flat growth so far in 2010.

Because GI’s 2010 growth rate and the State Demographer’s population loss estimate appear high, using the 2009-10 growth rate of 0.1% and applying forecaster judgment, Sierra chose a growth rate of -0.4 percent for 2010. This population growth rate results in flat residential customer growth from 2009 to 2010. For 2011, Sierra applied GI’s growth rate (0.9 percent). For 2012, a growth rate of 1% percent (vs. GI’s 1.1 percent) was used. For 2013, the GI growth rate of 1.3 percent was used. These population

³ This forecast, which was presented to the State Economic Forum, is considered a draft of the longer term forecast due out later this year.

growth rates are similar to the January 2010 State Demographer growth rates of 1 percent for 2011, 1.3 percent for 2012 and 1.2 percent for 2013.⁴

There is significant uncertainty regarding the timing and magnitude of a return to more normal population growth in Sierra's service territory. Given these uncertainties, the Company's long term forecast assumes relatively conservative population growth of 1.3 percent from 2013 through 2016 before settling in at the Nevada State Demographer's August 2008 long term population forecast in 2017. Population is forecasted to average 1.0 percent annual growth after 2016.

Employment and Output Trends. Employment in the Reno MSA declined 4.1 percent in 2008 and 7.6 percent in 2009. According to GI, forecasted employment is projected to decline 3.1 percent in 2010 before turning positive in 2011 with 0.3 percent growth. By 2012, GI expects the regional economy to recover with moderate economic and employment growth. Over the next ten years, GI projects real average output growth of 2.9 percent and employment growth of 1.8% percent. This compares with 3.3 percent output growth from 1997 through 2007 and 2.3 percent annual employment growth over that time period.

Mining Industry. This industry is a significant driver of growth in Sierra's service territory, accounting for approximately 17 percent of Sierra's annual sales. Sales to this class have been declining due to mine closures and customers exiting. Sales to the mines appear to have stabilized given the high gold prices. The 8th Amendment and IRP forecasts include the re-opening of the Queenstake Resources Freeport Mine ("Queenstake"), which has been shut down since August 2008 due to environmental issues. Both forecasts include 12 MW of peak demand and 85,147 MWh of sales annually for Queenstake.

Given the economic outlook and the projected impact on sales of Sierra's demand side management ("DSM") activity, growth of the Company's electricity sales and demand is significantly lower than in previous years. Retail energy sales net of DSM activity and small retail solar projects are expected to increase an average of 0.7 percent per year from 2010 to 2020. Peak demand grows at a slower average rate of 0.6 percent per year over this same period; the slower demand growth rate is mainly attributable to DSM and Demand Response ("DR") programs. The DSM projections are summarized below in the section titled "Forecast Results."

Summary Table (Figure LF-2)

Column (1) of Figure LF-2 shows the August 2008 Nevada State Demographer's historical and forecast estimate of Washoe County Population through 2028. Column (2) shows GI's February 2010 history and forecast. Column (3) shows the State Demographer's January 2010 forecast, Column (4) is the final population forecast for the

⁴ All three customer models, residential, GS1 and GS2 have significant autoregressive terms. These terms indicate that the customer growth from last year affects this year's growth. Therefore, the population growth rate will not exactly match the customer growth rate.

Reno MSA used in the regression modeling for the 8th Amendment Forecast, and Column (5) is the history and forecast of Sierra’s residential customers.

**FIGURE LF-2
FORECAST OF POPULATION AND COMPANY RESIDENTIAL CUSTOMERS
(NEVADA JURISDICTION)**

Reno-Sparks MSA										
Year	(1)		(2)		(3)		(4)		(5)	
	Population: Aug 2008 State Demographer	Percent Change	Population: February 2010 Global Insight	Percent Change	Population: January 2010 State Demographer	Percent Change	Population Used in Forecast	Percent Change	Residential Customers	Percent Change
1998	327,899		328,939		327,899		328,939		252,011	
1999	334,601	2.0%	337,338	2.6%	334,601	2.0%	337,338	2.6%	257,454	2.2%
2000	341,935	2.2%	346,190	2.6%	341,935	2.2%	346,190	2.6%	264,428	2.7%
2001	353,271	3.3%	356,306	2.9%	353,271	3.3%	356,306	2.9%	271,209	2.6%
2002	359,423	1.7%	366,290	2.8%	359,423	1.7%	366,290	2.8%	277,751	2.4%
2003	373,233	3.8%	375,992	2.6%	373,233	3.8%	375,992	2.6%	284,261	2.3%
2004	383,453	2.7%	386,207	2.7%	383,453	2.7%	386,207	2.7%	292,639	2.9%
2005	396,844	3.5%	395,708	2.5%	396,844	3.5%	395,708	2.5%	301,256	2.9%
2006	409,085	3.1%	403,689	2.0%	409,085	3.1%	403,689	2.0%	309,797	2.8%
2007	418,061	2.2%	411,662	2.0%	418,061	2.2%	411,662	2.0%	315,172	1.7%
2008	426,966	2.1%	417,425	1.4%	424,000	1.4%	413,308	0.4%	316,541	0.4%
2009	436,776	2.3%	420,534	0.7%	416,632	-1.7%	411,242	-0.5%	316,314	-0.1%
2010	445,329	2.0%	423,640	0.7%	412,955	-0.9%	409,597	-0.4%	316,382	0.0%
2011	453,875	1.9%	427,600	0.9%	417,138	1.0%	413,283	0.9%	318,648	0.7%
2012	462,514	1.9%	432,398	1.1%	422,364	1.3%	417,416	1.0%	320,930	0.7%
2013	471,132	1.9%	438,066	1.3%	427,237	1.2%	422,897	1.3%	324,235	1.0%
2014	479,581	1.8%	444,496	1.5%	431,338	1.0%	428,394	1.3%	327,724	1.1%
2015	487,581	1.7%	451,847	1.7%	435,535	1.0%	433,963	1.3%	331,392	1.1%
2016	496,119	1.8%	459,909	1.8%	N/A		439,605	1.3%	335,197	1.1%
2017	503,940	1.6%	468,502	1.9%	N/A		444,880	1.2%	338,811	1.1%
2018	511,366	1.5%	477,214	1.9%	N/A		450,219	1.2%	342,490	1.1%
2019	518,351	1.4%	486,348	1.9%	N/A		455,621	1.2%	346,218	1.1%
2020	524,944	1.3%	495,632	1.9%	N/A		460,633	1.1%	349,713	1.0%
2021	531,204	1.2%	505,399	2.0%	N/A		465,700	1.1%	353,245	1.0%
2022	537,270	1.1%	515,423	2.0%	N/A		471,018	1.1%	356,936	1.0%
2023	543,087	1.1%	526,094	2.1%	N/A		476,118	1.1%	360,492	1.0%
2024	548,709	1.0%	536,866	2.0%	N/A		481,047	1.0%	363,932	1.0%
2025	554,134	1.0%	548,054	2.1%	N/A		485,803	1.0%	367,255	0.9%
2026	559,373	0.9%	559,413	2.1%	N/A		490,396	0.9%	370,467	0.9%
2027	564,448	0.9%	571,315	2.1%	N/A		494,845	0.9%	373,580	0.8%
2028	569,371	0.9%	583,417	2.1%	N/A		499,161	0.9%	376,604	0.8%
2029	N/A		595,688	2.1%	N/A		503,514	0.9%	379,652	0.8%
2030	N/A		608,128	2.1%	N/A		507,906	0.9%	382,727	0.8%

Comparison of IRP Forecast and the 8th Amendment Forecast.

Key differences between the IRP forecast and the 8th Amendment forecast are summarized below:

1. The 8th Amendment forecast used GI’s December 2009 Reno MSA quarterly population, household, real personal income, and real gross metro product forecasts. The new IRP forecast uses the February 2010 GI Reno MSA quarterly population, household, real personal income, and real gross metro product forecasts.
2. As discussed above, the near-term population growth forecast has been updated using Sierra’s actual customer growth rates for the 1st quarter of 2010,

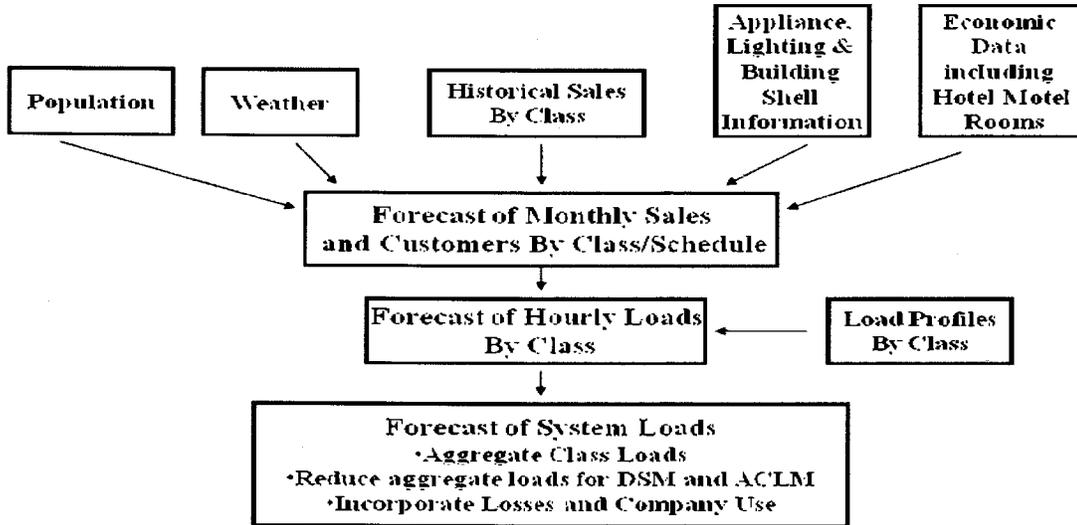
the February 2010 Global Insight population estimates, and a January 2010 forecast from the State Demographer. The 8th Amendment forecast used the December 2009 GI population forecast coupled with the residential customer growth through November 2009. For the long-term population growth rates, the State Demographer's August 2008 long run forecast was used for both forecasts, although the starting points were different. The IRP forecast is synchronized with the State Demographer's August 2008 long run forecast in 2017, while the 8th Amendment forecast made the transition in 2015.

3. Both forecasts are based on weather normalized using a 20 year average. The 8th Amendment forecast relied on data from the period of December 1989 through November 2009, while the IRP forecast relies on data from the period of January 1990 through December 2009.
4. The DSM savings estimates used in the 8th Amendment forecast were updated in February 2010 for use in the IRP load forecast. Peak demand reductions from a DR pilot program also have been included in this load forecast. The reductions in the small solar, wind and hydro estimates were also updated and the increase in those reductions was based on discussions with the project manager responsible for those programs.
5. The energy efficiency data for both residential and Small C&I customer classes were updated in the IRP forecast to include the 2010 Energy Information Administration's ("EIA") 2010 Annual Energy Outlook forecast.
6. The price forecast was updated from the 8th Amendment forecast using more current revenue forecasts provided by the Company's Financial Planning and Analysis department.
7. For the California jurisdiction, South Lake Tahoe Airport historical and normal degree days were used to develop the IRP forecast, while the 8th Amendment forecast used the Reno-Tahoe airport weather data.

B. LOAD FORECASTING PROCESS

The forecast is developed from a set of monthly econometric models estimated for each of the primary revenue classes – residential, Small C&I (separate models are estimated for the GS1 and GS2 rate classes), Large C&I, and public street and highway lighting. The process entails first constructing the underlying databases which include historical billed sales, number of customers, population and economic data, prices, weather conditions and historical end-use saturation and efficiency trends. Customer class sales forecasts are combined with customer class hourly profiles and aggregated to a system hourly load forecast. An initial energy and peak forecasts are derived from the system hourly load forecasts. The energy and peak forecast are then adjusted to account for the impact of efficiency and load control programs not already captured by the forecast model. Figure LF-3 depicts the forecasting process.

**FIGURE LF-3
SCHEMATIC DIAGRAM OF
SIERRA'S LOAD FORECASTING PROCESS**



1. CONSTRUCT FORECAST DATABASE

The first step in the forecast process is to construct the forecast database. Monthly billed sales and customer data are extracted from the Company's billing data. Historic and forecasted populations are provided by GI and the State Demographer.⁵ Additional economic data series, both historical and forecast, are obtained from GI. The population and residential customer forecasts are shown in Figure LF-2 above.

End-use saturation and efficiencies projections are explicitly accounted for in the residential and commercial sales forecast models. The Mountain Census Division end-use saturation and efficiency projections were obtained from Itron, Inc. ("Itron"). Itron develops saturation and efficiency projections for nine U.S. Census Divisions using data generated from the EIA long-term energy outlook. The end-use data reflect EIA's 2010 Annual Energy Outlook which was completed last spring. EIA's end-use forecasts include the estimated effects on electricity use of the American Recovery and Reinvestment and Recovery Act ("ARRA") passed in March 2009, as well as efficiency and building code standard changes contained in the federal Energy Information and Security Act (2007) and the mandated minimum residential central air conditioner efficiency of Seasonal Energy Efficiency Rating ("SEER") 13 that took effect in 2006. In addition, Sierra recently completed a residential appliance saturation survey in November and December 2008. Results of the survey were used to calibrate the Census Division end-use projections for the Sierra service area. The commercial end-use efficiency indices are based on EIA's long-term commercial sector energy forecast for

⁵ Copies of the Nevada State Demographer's October 2008 long-term population forecast and the January 2010 short term population forecast are provided as Technical Appendix Items LF-6 and LF-5.

the Mountain Census Region. These indices were modified to reflect Sierra's commercial customer mix based on Sierra's Small C&I market survey conducted in December 2008 and January 2009.

Historical and forecasted economic data for the Reno MSA were provided by GI. Sierra also develops its own forecasts of key variables such as retail rates based on forecasts from the Company's Financial Planning and Analysis section. Sales and peak demand forecasts for the large mining customers are based on discussion with the Company's Major Account Executives ("MAEs") who discuss these forecasts with the individual customers. Residential and commercial customer forecasts are based on econometric models that are described below.

Historical and projected real electricity prices are generated for each of the primary customer classes. Historical prices are constructed from billed revenues and sales. The price series is defined as a 12-month moving average of the monthly billed revenue per kWh. The price forecast is based on Sierra's projection of future operating costs and associated revenue requirements.

The Nevada jurisdiction forecast models use a base of 65 degree days. Cooling degree days ("CDD") are calculated as the average daily temperature minus 65 and heating degree days ("HDD") are calculated as 65 less the average daily temperature. Actual and normal monthly HDD and CDD for Nevada loads are constructed from daily temperature data from the Reno-Tahoe International Airport. The California sales models use South Lake Tahoe airport degree days with a 65 degree base for residential modeling and 60 for commercial. Cycle-weighted HDD and CDD are constructed for estimating the monthly billed-sales forecast models.⁶ Calendar month actual and normal HDD and CDD are used in generating sales and energy forecasts on a calendar-year basis. This IRP forecast is based on twenty-year normal HDD and CDD (January 1990 through December 2009).

2. ESTIMATE FORECAST MODELS

The 2011 through 2030 sales forecast is developed separately for four defined customer classes and sub-classes, primarily through econometric modeling. Monthly forecast models are prepared for the four primary customer and sub-customer classes:

- Residential (both California and Nevada jurisdictions)
- Small C&IU, both GS1 and GS2 separately for the Nevada jurisdiction, and rates A1 and A2 for the California jurisdiction
- Large C&I – GS3 (Nevada jurisdiction)
- Public Street & Highway Lights (both California and Nevada jurisdictions)

⁶ If either calculation results in a negative number, the result is 0 for that day.

The sales models⁷ for the Nevada jurisdiction were prepared using billed sales and customer data from January 1998 through February 2010. The residential, GS1 and GS2 commercial customer class total sales forecasts are derived by combining separate average use and customer forecast models. The GS3 and street lighting forecasts are based on total monthly sales forecast models. The Irrigation class forecast is based on judgment. The GS4, NG3, and NG4 forecasts are based on MAE and customer input.

In addition to economic and price projections, the residential and commercial forecast models explicitly account for long-term end-use saturation and efficiency trends as well as projected improvements in thermal shell integrity in the residential model. End-use saturation and efficiency trends are incorporated in the constructed end-use model variables used in estimating the forecast models. This approach, known as a Statistically Adjusted End-Use (“SAE”) model, is presented in detail for the residential sector below. A similar approach is used in constructing the GS1 and GS2 commercial forecast models. The GS3 model does not use the SAE specification as the sales forecast appeared too high using that methodology. Model specifications for models used to prepare this IRP forecast are provided in Technical Appendix Item LF-1.

3. WEATHER NORMALIZED SALES AND DEMAND

Historical sales and demand are weather normalized to provide a comparable basis for evaluating projected energy and demand growth. The SAE models are not well designed for weather normalization, as the constructed interactive variables tend to reduce the size of the weather coefficient. Less complex non-SAE model coefficients were used to weather normalize sales. A description of the weather normalization methodology is presented in Technical Appendix Item LF-1.

4. DEVELOP CUSTOMER CLASS SALES AND CUSTOMER FORECASTS

Once estimated, the forecast models are used to generate long-term customer class sales and customer forecasts. Class sales and customers are forecasted through 2030. The forecast is driven by economic and household projections, prices, and end-use saturation and efficiency trends. Incremental DSM and DR and small solar, wind and hydro from future programs are not captured by historical data. Thus, the baseline forecast is adjusted for the incremental future DSM, DR and small solar wind and hydro savings and significant changes in expected demand that are not captured by the forecast models.

5. SYSTEM ENERGY, SALES AND PEAK FORECASTS

Forecasted class sales are used to drive the system hourly load, energy, and demand forecast. The hourly load forecast process is a “bottom-up” forecasting application. Class sales forecasts are combined with hourly class load profiles to generate an hourly customer class load forecast. The class hourly load forecasts are aggregated, adjusted for losses and calibrated out to actual system hourly load. The loss/Company use factor is

⁷ See Technical Appendix Item LF-1 for a discussion of the California models.

approximately 6 percent which is based on the historical relationship between sales and delivered energy. The result is an 8,760 system hourly load forecast that captures the impact of differences in usage patterns across customer classes. Monthly and annual system energy and peak demand are then calculated from the 8,760 hourly system load forecast.

Customer class hourly profile models are estimated from historical load research data. Hourly class load models are estimated by relating historical hourly load data to daily weather conditions, day of the week, month, and holidays. Forecasted profiles are then generated using normal daily weather and a future calendar.

The system hourly load forecast was adjusted for forecasted DSM savings, the DR pilot program and the impact of small solar, wind and hydro projects. Hourly estimated impacts of these three Company programs are subtracted from the system hourly load forecast, resulting in a final hourly load demand, energy, and peak demand forecast that is used for resource planning.

C. FORECAST RESULTS - NEVADA AND CALIFORNIA JURISDICTIONS

The jurisdictionalized results from the IRP forecast are summarized below. Figures LF-6A and LF-6B LF-9, LF-10A, LF-12, LF-14, LF-15, LF-16A, LF-17, LF-18 and LF-19 show the results for the Nevada jurisdiction. Figures LF-6C to LF-6D LF-10B, LF-16B show the results for the California jurisdiction. All other tables in this section show the results for both the California and Nevada jurisdictions.

1. SALES, PEAK DEMAND, RESIDENTIAL CUSTOMERS AND POPULATION

Figure LF-4 shows the billed and weather normalized billed sales from 1998 to 2009 for Sierra's Nevada and California jurisdictions.⁸

⁸ Peak demand, losses and Company use are not available by jurisdiction.

**FIGURE LF-4
NEVADA AND CALIFORNIA HISTORICAL SALES**

Year	NEVADA				CALIFORNIA			
	Annual Sales (MWH) As Billed	% Growth	Annual Sales (MWH) Weather Normalized	% Growth	Annual Sales (MWH) As Billed	% Growth	Annual Sales (MWH) Weather Normalized	% Growth
1998	7,775,516		7,731,946		531,997		524,892	
1999	7,971,378	2.5%	7,997,558	3.4%	511,604	-3.8%	512,533	-2.4%
2000	8,243,450	3.4%	8,250,819	3.2%	518,046	1.3%	521,158	1.7%
2001	8,252,608	0.1%	8,230,693	-0.2%	509,347	-1.7%	510,990	-2.0%
2002	8,137,372	-1.4%	8,103,104	-1.6%	519,395	2.0%	516,875	1.2%
2003	8,447,082	3.8%	8,385,485	3.5%	526,405	1.3%	525,692	1.7%
2004	8,567,966	1.4%	8,553,087	2.0%	533,429	1.3%	533,105	1.4%
2005	8,696,122	1.5%	8,650,980	1.1%	537,364	0.7%	534,875	0.3%
2006	8,126,065	-6.6%	8,061,271	-6.8%	548,762	2.1%	546,124	2.1%
2007	8,246,986	1.5%	8,149,874	1.1%	550,655	0.3%	549,783	0.7%
2008	8,113,703	-1.6%	8,044,268	-1.3%	541,625	-1.6%	540,467	-1.7%
2009	7,616,334	-6.1%	7,569,438	-5.9%	542,168	0.1%	542,261	0.3%
Note: Includes resale sales				Note: Includes resale sales				

Figure LF-5 is a summary of the Reno MSA population history forecast and jurisdictional residential customer history and forecast.

**FIGURE LF-5
FORECAST OF POPULATION AND RESIDENTIAL CUSTOMERS⁹**

Year	NV:		Nevada		CA:		California	
	Population Used in Forecast	Percent Change	Residential Customers	Percent Change	Population Used in Forecast	Percent Change	Residential Customers	Percent Change
1998	328,939		213,924		328,939		38,087	
1999	337,338	2.6%	219,107	2.4%	337,338	2.6%	38,346	0.7%
2000	346,190	2.6%	225,892	3.1%	346,171	2.6%	38,536	0.5%
2001	356,306	2.9%	232,419	2.9%	356,184	2.9%	38,790	0.7%
2002	366,290	2.8%	238,708	2.7%	365,972	2.7%	39,043	0.7%
2003	375,992	2.6%	244,803	2.6%	375,434	2.6%	39,457	1.1%
2004	386,207	2.7%	252,973	3.3%	385,357	2.6%	39,666	0.5%
2005	395,708	2.5%	261,218	3.3%	394,503	2.4%	40,038	0.9%
2006	403,689	2.0%	269,591	3.2%	402,100	1.9%	40,206	0.4%
2007	411,662	2.0%	274,668	1.9%	409,494	1.8%	40,505	0.7%
2008	413,308	0.4%	275,763	0.4%	411,132	0.4%	40,777	0.7%
2009	411,242	-0.5%	275,348	-0.2%	410,309	-0.2%	40,965	0.5%
2010	409,597	-0.4%	275,730	0.1%	410,309	0.0%	40,652	-0.8%
2011	413,283	0.9%	277,766	0.7%	410,309	0.0%	40,882	0.6%
2012	417,416	1.0%	279,958	0.8%	412,771	0.6%	40,971	0.2%
2013	422,897	1.3%	283,080	1.1%	418,200	1.3%	41,155	0.4%
2014	428,394	1.3%	286,358	1.2%	424,356	1.5%	41,365	0.5%
2015	433,963	1.3%	289,786	1.2%	431,393	1.7%	41,606	0.6%
2016	439,605	1.3%	293,334	1.2%	438,947	1.8%	41,863	0.6%
2017	444,880	1.2%	296,711	1.2%	445,867	1.6%	42,100	0.6%
2018	450,219	1.2%	300,165	1.2%	452,437	1.5%	42,325	0.5%
2019	455,621	1.2%	303,682	1.2%	458,617	1.4%	42,536	0.5%
2020	460,633	1.1%	306,977	1.1%	464,450	1.3%	42,736	0.5%
2021	465,700	1.1%	310,320	1.1%	469,989	1.2%	42,925	0.4%
2022	471,018	1.1%	313,827	1.1%	475,356	1.1%	43,109	0.4%
2023	476,118	1.1%	317,207	1.1%	480,503	1.1%	43,285	0.4%
2024	481,047	1.0%	320,477	1.0%	485,477	1.0%	43,455	0.4%
2025	485,803	1.0%	323,636	1.0%	490,277	1.0%	43,619	0.4%
2026	490,396	0.9%	326,689	0.9%	494,912	0.9%	43,777	0.4%
2027	494,845	0.9%	329,649	0.9%	499,402	0.9%	43,931	0.4%
2028	499,161	0.9%	332,524	0.9%	503,758	0.9%	44,080	0.3%
2029	503,514	0.9%	335,421	0.9%	508,151	0.9%	44,230	0.3%
2030	507,906	0.9%	338,345	0.9%	512,583	0.9%	44,382	0.3%

Figures LF-6A and LF-6B show the calendar year sales forecast by customer class for the Nevada jurisdiction, after and before reductions for incremental DSM and small solar installations for the entire Sierra system. Annual sales growth averages 0.7 percent from 2009 through 2012. From 2012 to 2030, annual sales growth averages 1.1 percent. Figures LF-6C and LF-6D show the same information for the California jurisdiction.

⁹ The California forecast used GI data from January 2010, while the Nevada forecast used GI data for February 2010. The State Demographer's draft January 2010 population projections for Washoe County were used to create the Nevada jurisdiction population forecast, but were not available at the time the California jurisdiction population forecast was completed for this filing.

Figure LF-7 shows the total sales forecast by season (Nevada and California jurisdictions) after the reductions for incremental DSM and small solar installations.

FIGURE LF-6A

CALENDAR SALES FORECAST (GWH) INCLUDING RESALE SALES AFTER DSM AND SMALL SOLAR REDUCTIONS (NEVADA JURISDICTION)

Year	Residential	Small C&I	Large C&I	Street Lighting	Resale	Total
2010	2,154	2,920	2,510	16	9	7,609
2011	2,145	2,922	2,515	16	9	7,608
2012	2,164	2,935	2,606	16	9	7,730
2013	2,178	2,948	2,612	16	9	7,764
2014	2,186	2,965	2,616	16	9	7,792
2015	2,187	2,984	2,618	17	9	7,816
2016	2,209	3,017	2,623	17	9	7,874
2017	2,217	3,044	2,629	17	9	7,916
2018	2,240	3,074	2,637	17	9	7,977
2019	2,274	3,110	2,648	17	9	8,059
2020	2,331	3,163	2,661	18	9	8,182
2021	2,411	3,219	2,675	18	9	8,331
2022	2,501	3,278	2,688	18	9	8,495
2023	2,574	3,346	2,704	18	9	8,652
2024	2,630	3,421	2,720	19	9	8,799
2025	2,666	3,492	2,738	19	9	8,924
2026	2,711	3,567	2,553	19	9	8,859
2027	2,774	3,642	2,572	19	9	9,017
2028	2,880	3,726	2,592	19	9	9,227
2029	2,970	3,802	2,613	20	9	9,413
2030	3,049	3,884	2,635	20	9	9,597

**FIGURE LF-6B
CALENDAR SALES FORECAST (GWH) INCLUDING RESALE SALES
BEFORE DSM AND SMALL SOLAR REDUCTIONS (NEVADA
JURISDICTION)**

Year	Residential	Small C&I	Large C&I	Street Lighting	Resale	Total
2010	2,214	2,941	2,517	16	9	7,696
2011	2,269	2,962	2,531	16	9	7,786
2012	2,311	2,998	2,631	16	9	7,965
2013	2,319	3,036	2,646	16	9	8,027
2014	2,346	3,076	2,659	16	9	8,107
2015	2,366	3,120	2,671	17	9	8,182
2016	2,407	3,176	2,684	17	9	8,293
2017	2,434	3,227	2,700	17	9	8,387
2018	2,474	3,281	2,717	17	9	8,499
2019	2,522	3,341	2,737	17	9	8,628
2020	2,577	3,411	2,758	18	9	8,773
2021	2,621	3,474	2,774	18	9	8,896
2022	2,671	3,542	2,791	18	9	9,031
2023	2,723	3,613	2,808	18	9	9,171
2024	2,786	3,691	2,825	19	9	9,329
2025	2,829	3,764	2,843	19	9	9,464
2026	2,881	3,839	2,659	19	9	9,407
2027	2,933	3,915	2,678	19	9	9,554
2028	2,992	3,998	2,698	19	9	9,717
2029	3,031	4,074	2,719	20	9	9,853
2030	3,080	4,157	2,741	20	9	10,006

**FIGURE LF-6C
CALENDAR SALES FORECAST (GWH) INCLUDING RESALE SALES AFTER
DSM AND SMALL SOLAR REDUCTIONS (CALIFORNIA JURISDICTION)**

Year	Residential	Small C&I	Large C&I	Street Lighting	Resale	Total
2010	263	164	116	0.4	6	549
2011	262	161	116	0.4	6	546
2012	261	160	116	0.4	6	543
2013	261	159	116	0.4	6	542
2014	262	158	116	0.4	6	542
2015	263	158	116	0.4	6	543
2016	265	157	116	0.4	6	544
2017	266	156	117	0.4	6	545
2018	268	155	117	0.4	6	546
2019	269	155	117	0.4	6	547
2020	272	154	117	0.4	6	549
2021	276	154	117	0.4	6	553
2022	279	155	117	0.4	6	557
2023	282	156	117	0.4	6	561
2024	285	157	117	0.4	6	565
2025	287	158	117	0.4	6	568
2026	289	158	118	0.4	6	571
2027	291	159	118	0.4	6	574
2028	295	160	118	0.4	6	579
2029	298	161	118	0.4	6	583
2030	301	162	118	0.4	6	588

Note: resale sales are not a part of the California territory sale. These sales are added to the Nevada territory for purposes of the California territory sale analysis.

**FIGURE LF-6D
CALENDAR SALES FORECAST (GWH) INCLUDING RESALE SALES
BEFORE DSM AND SMALL SOLAR REDUCTIONS (CALIFORNIA
JURISDICTION)**

Year	Residential	Small C&I	Large C&I	Street Lighting	Resale	Total
2010	265	165	116	0.4	6	552
2011	267	163	116	0.4	6	552
2012	268	163	116	0.4	6	553
2013	270	163	116	0.4	6	555
2014	272	164	116	0.4	6	558
2015	274	164	116	0.4	6	560
2016	276	164	116	0.4	6	563
2017	278	164	117	0.4	6	565
2018	280	165	117	0.4	6	568
2019	282	165	117	0.4	6	570
2020	284	165	117	0.4	6	572
2021	285	165	117	0.4	6	574
2022	287	166	117	0.4	6	577
2023	288	167	117	0.4	6	579
2024	290	168	117	0.4	6	581
2025	291	169	117	0.4	6	584
2026	292	170	118	0.4	6	586
2027	294	171	118	0.4	6	588
2028	295	172	118	0.4	6	591
2029	296	173	118	0.4	6	593
2030	298	173	118	0.4	6	595

**FIGURE LF-7
RETAIL SEASONAL SALES FORECAST (GWH)
AFTER DSM AND SMALL SOLAR REDUCTIONS¹⁰
(NEVADA, CALIFORNIA AND TOTAL SYSTEM)**

Year	Residential		Small C&I		Large C&I		Street Lighting		Total Nevada		California		Total System	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
2010	578	1,576	850	2,070	669	1,840	3	12	2,101	5,499	121	421	2,222	5,920
2011	577	1,568	851	2,072	671	1,845	3	12	2,102	5,496	121	419	2,223	5,916
2012	580	1,584	850	2,085	693	1,913	3	12	2,127	5,595	120	418	2,247	6,012
2013	584	1,595	857	2,092	696	1,916	4	13	2,140	5,615	120	417	2,260	6,031
2014	585	1,601	861	2,104	698	1,918	4	13	2,148	5,635	120	417	2,268	6,052
2015	585	1,602	867	2,118	698	1,920	4	13	2,153	5,653	120	417	2,274	6,070
2016	589	1,620	873	2,144	698	1,925	4	13	2,163	5,702	120	418	2,283	6,120
2017	592	1,625	881	2,163	701	1,928	4	13	2,178	5,729	121	419	2,299	6,148
2018	598	1,642	888	2,186	703	1,934	4	13	2,193	5,775	121	419	2,314	6,194
2019	607	1,667	900	2,210	706	1,942	4	14	2,217	5,833	121	420	2,338	6,253
2020	620	1,711	912	2,251	708	1,954	4	14	2,243	5,930	121	422	2,364	6,352
2021	640	1,771	929	2,290	713	1,962	4	14	2,286	6,036	123	425	2,409	6,461
2022	661	1,839	945	2,333	717	1,972	4	14	2,327	6,159	123	428	2,450	6,587
2023	680	1,894	960	2,386	721	1,983	4	14	2,365	6,278	124	431	2,490	6,709
2024	695	1,935	982	2,440	725	1,995	4	14	2,405	6,384	125	434	2,531	6,818
2025	704	1,962	1,001	2,491	730	2,008	4	15	2,439	6,476	126	437	2,565	6,913
2026	716	1,995	1,021	2,546	681	1,872	4	15	2,422	6,428	127	438	2,548	6,867
2027	732	2,042	1,042	2,601	686	1,887	4	15	2,464	6,544	127	441	2,591	6,986
2028	756	2,125	1,061	2,665	689	1,903	4	15	2,510	6,708	128	445	2,638	7,153
2029	780	2,190	1,082	2,719	696	1,916	4	15	2,563	6,841	129	448	2,692	7,289
2030	799	2,250	1,107	2,777	703	1,932	4	15	2,613	6,974	130	452	2,743	7,426

Figure LF-8 shows the energy and peak forecast by jurisdiction through 2040 adjusted for DSM, DR and small solar, wind and hydro load reduction programs.

¹⁰ Does not include resale sales.

**FIGURE LF-8
NEVADA AND CALIFORNIA SYSTEM
ENERGY (GWH)¹¹ AND PEAK DEMAND FORECAST (MW)¹² AFTER DSM, DR
AND SMALL SOLAR, WIND AND HYDRO REDUCTIONS**

Year	NEVADA			CALIFORNIA		
	Energy GWhs	Summer Peak MW	Winter Peak MW	Energy GWhs	Summer Peak MW	Winter Peak MW
2010	8,096	1,513	1,202	575	65	113
2011	8,093	1,508	1,199	573	67	113
2012	8,248	1,526	1,208	571	66	108
2013	8,262	1,530	1,225	568	65	110
2014	8,292	1,532	1,232	568	64	112
2015	8,316	1,533	1,235	570	66	114
2016	8,400	1,542	1,248	573	67	113
2017	8,423	1,543	1,251	572	66	115
2018	8,488	1,569	1,257	573	65	108
2019	8,575	1,585	1,279	574	66	114
2020	8,728	1,603	1,305	577	67	116
2021	8,866	1,628	1,341	581	68	116
2022	9,041	1,649	1,377	585	68	115
2023	9,209	1,669	1,403	589	68	119
2024	9,392	1,715	1,433	596	68	117
2025	9,500	1,736	1,458	597	70	119
2026	9,431	1,733	1,456	599	71	121
2027	9,599	1,768	1,487	603	71	119
2028	9,850	1,794	1,527	610	70	122
2029	10,022	1,846	1,557	613	70	118
2030	10,218	1,879	1,605	618	71	119
2031	10,342	1,901	1,625	624	72	120
2032	10,497	1,924	1,664	632	73	102
2033	10,594	1,947	1,684	636	74	103
2034	10,723	1,970	1,704	643	75	104
2035	10,853	1,994	1,725	649	76	105
2036	11,015	2,018	1,746	657	77	106
2037	11,118	2,042	1,767	661	78	107
2038	11,253	2,066	1,788	668	79	108
2039	11,390	2,091	1,810	674	80	109
2040	11,560	2,116	1,826	683	81	116

Figure LF-9 is a summary of peaks and annual system energy for the Nevada jurisdiction prior to reductions from the DSM, DR and small solar, wind and hydro load reduction programs.

¹¹ Includes retail sales and losses/Company use, and is net of incremental DSM and small solar project reductions.

¹² Net of incremental DSM and small solar, wind and hydro project reductions.

**FIGURE LF-9
SYSTEM ENERGY (GWH)¹³ AND PEAK DEMAND FORECAST (MW)¹⁴
BEFORE DSM, DR AND SMALL SOLAR, WIND AND HYDRO REDUCTIONS
(NEVADA JURISDICTION)**

Year	Energy				Summer Peak			
	Gross, w/o incremental DSM, Solar & IRR TOU	Less: incremental DSM, Solar	Less: DR (1)	Net of incremental DSM, Solar & IRR TOU	Gross, w/o incremental DSM, Solar & IRR TOU	Less: incremental DSM & Solar	Less: DR	Net of incremental DSM, Solar & DR
2010	8,189	93	0	8,096	1,526	13	0	1,513
2011	8,283	190	0	8,093	1,538	25	5	1,508
2012	8,525	278	0	8,248	1,574	41	7	1,526
2013	8,595	333	0	8,262	1,592	53	9	1,530
2014	8,681	389	0	8,292	1,610	69	9	1,532
2015	8,760	444	0	8,316	1,623	81	9	1,533
2016	8,900	500	0	8,400	1,640	89	9	1,542
2017	8,978	555	0	8,423	1,655	103	9	1,543
2018	9,097	609	0	8,488	1,691	113	9	1,569
2019	9,235	659	0	8,575	1,716	122	9	1,585
2020	9,413	684	0	8,728	1,734	122	9	1,603
2021	9,522	655	0	8,866	1,761	124	9	1,628
2022	9,666	625	0	9,041	1,785	127	9	1,649
2023	9,815	606	0	9,209	1,818	140	9	1,669
2024	10,012	620	0	9,392	1,865	141	9	1,715
2025	10,129	629	0	9,500	1,878	133	9	1,736
2026	10,068	637	0	9,431	1,879	137	9	1,733
2027	10,225	626	0	9,599	1,912	135	9	1,768
2028	10,428	577	0	9,850	1,946	143	9	1,794
2029	10,544	522	0	10,022	1,991	136	9	1,846
2030	10,708	490	0	10,218	2,020	132	9	1,879

2. CLASS SUMMER AND WINTER PEAK FORECASTS

Figures LF-10A and LF-10B show forecasted peaks disaggregated by sector (residential, commercial, and industrial) for Nevada and California jurisdictions respectively

¹³ Includes retail sales and losses/Company use, and is net of incremental DSM and small solar project reductions.

¹⁴ Net of incremental DSM and small solar project reductions.

**FIGURE LF-10A
CLASS COINCIDENT PEAK FORECAST (MW)¹⁵
(NEVADA JURISDICTION)**

Year	Nevada									
	Residential		Small C&I		Large C&I		Street Lighting		Resale	
	Summer Peak	Winter Peak	Summer Peak	Winter Peak	Summer Peak	Winter Peak	Summer Peak	Winter Peak	Summer Peak	Winter Peak
2010	491	469	520	325	327	282	0	4	1	2
2011	528	477	497	335	324	284	0	4	1	2
2012	550	442	488	363	342	293	0	4	1	2
2013	542	482	513	346	339	297	0	4	1	2
2014	520	497	545	341	345	298	0	4	1	2
2015	553	501	528	346	342	299	0	4	1	2
2016	561	506	535	360	344	301	0	4	1	2
2017	561	506	543	370	348	300	0	4	1	2
2018	580	504	553	375	353	303	0	4	1	2
2019	590	532	567	372	351	306	0	4	1	2
2020	610	546	556	380	358	309	0	4	1	2
2021	608	555	585	388	356	311	0	4	1	2
2022	613	562	597	404	360	313	0	4	1	2
2023	628	566	611	416	362	312	0	4	1	2
2024	651	587	630	413	362	316	0	4	1	2
2025	669	599	617	421	369	319	0	5	1	2
2026	682	610	630	430	345	298	0	5	1	2
2027	680	621	663	439	343	300	0	5	1	2
2028	690	622	680	463	348	300	0	5	1	2
2029	710	618	694	470	353	303	0	5	1	2
2030	720	641	712	480	351	307	0	5	1	2

**FIGURE LF-10B
CLASS COINCIDENT PEAK FORECAST (MW)¹⁶
(CALIFORNIA JURISDICTION)**

Year	California									
	Residential		Small C&I		Large C&I		Street Lighting		Resale	
	Summer Peak	Winter Peak	Summer Peak	Winter Peak	Summer Peak	Winter Peak	Summer Peak	Winter Peak	Summer Peak	Winter Peak
2010	25	54	23	26	12	24	0	<1	Included with Nevada	
2011	26	52	23	25	13	23	0	<1	Included with Nevada	
2012	26	52	23	25	12	23	0	<1	Included with Nevada	
2013	25	50	23	25	12	23	0	<1	Included with Nevada	
2014	25	53	22	26	12	24	0	<1	Included with Nevada	
2015	26	53	23	26	12	24	0	<1	Included with Nevada	
2016	26	52	23	25	13	23	0	<1	Included with Nevada	
2017	26	53	23	26	12	24	0	<1	Included with Nevada	
2018	25	53	23	26	12	24	0	<1	Included with Nevada	
2019	26	53	23	26	12	24	0	<1	Included with Nevada	
2020	26	54	23	26	13	24	0	<1	Included with Nevada	
2021	26	54	24	26	13	24	0	<1	Included with Nevada	
2022	26	53	24	26	13	24	0	<1	Included with Nevada	
2023	26	55	24	27	13	25	0	<1	Included with Nevada	
2024	26	55	24	27	13	25	0	<1	Included with Nevada	
2025	27	55	24	27	13	25	0	<1	Included with Nevada	
2026	27	56	25	27	13	25	0	<1	Included with Nevada	
2027	27	56	25	27	13	25	0	<1	Included with Nevada	
2028	27	56	24	27	13	25	0	<1	Included with Nevada	
2029	27	57	24	28	13	25	0	<1	Included with Nevada	
2030	27	55	25	27	13	25	0	<1	Included with Nevada	

¹⁵ The values in the table are at the meter and do not include reductions for DSM or small solar projects.

¹⁶ The values in the table are at the meter and do not include reductions for DSM or small solar projects.

3. DSM, DR, AND SMALL SOLAR, WIND AND HYDRO REDUCTIONS

Figure LF-11 is a summary of the annual energy reductions for DSM, DR and small solar projects for both jurisdictions.

**FIGURE LF-11
DSM AND SMALL SOLAR REDUCTIONS BY CUSTOMER CLASS
(GWH) (NEVADA AND CALIFORNIA JURISDICTIONS)**

Year	Nevada Energy DSM							California Energy DSM		
	Residential		Small C&I	Total			Res	Small C&I	Total DSM	
	DSM	Small Solar	DSM	DSM	Small Solar	All	DSM	DSM	DSM	
2010	55	5	28	82	5	87	2	1	4	
2011	113	11	55	168	11	178	2	2	4	
2012	155	17	88	243	17	260	2	3	5	
2013	166	25	122	288	25	313	2	4	6	
2014	179	31	155	334	31	365	2	5	7	
2015	192	38	188	379	38	417	0	6	7	
2016	204	44	221	425	44	469	0	7	8	
2017	217	51	254	471	51	522	0	8	9	
2018	228	57	288	515	57	572	0	9	10	
2019	235	63	321	556	63	620	0	10	10	
2020	227	70	345	572	70	642	-1	11	10	
2021	185	76	355	540	76	616	-2	11	9	
2022	139	82	366	505	82	587	-2	11	9	
2023	110	89	371	481	89	570	-2	11	10	
2024	111	95	374	486	95	581	-2	11	10	
2025	112	102	377	489	102	591	-1	11	10	
2026	112	108	378	490	108	598	0	11	11	
2027	95	114	379	474	114	588	-1	11	10	
2028	41	121	379	420	121	541	-2	11	9	
2029	-15	127	379	363	127	491	-2	11	9	
2030	-84	133	379	295	133	428	-2	11	9	

Note: These reductions are at the meter.

Figure LF-12 is a summary of the peak demand effects of the Nevada programs.¹⁷

¹⁷ California peak effects are not separately calculated.

**FIGURE LF-12
DSM AND SMALL SOLAR, WIND AND HYDRO PEAK REDUCTIONS BY
CUSTOMER CLASS ADJUSTED FOR LOSSES (MW)
(NEVADA JURISDICTION)**

Year	Residential			Small Commercial & Industrial			Total			
	DSM	Small Solar	Total	DSM	Small Solar	Total	DSM	Small Solar	DR	Total
2010	5.5	1	7	6.4	0	6	12	1	0	13
2011	11.5	1	13	12.4	0	12	24	1	5	30
2012	18.3	2	20	20.5	0	21	39	2	7	48
2013	22.1	2	24	28.7	0	29	51	2	9	62
2014	26.7	4	31	37.9	0	38	65	4	9	78
2015	29.8	7	36	44.6	0	45	74	7	9	90
2016	32.6	6	38	50.9	0	51	83	6	9	98
2017	36.7	7	43	59.6	0	60	96	7	9	112
2018	40.4	3	44	69.2	0	69	110	3	9	122
2019	41.0	4	45	76.6	0	77	118	4	9	131
2020	37.5	9	46	75.7	0	76	113	9	9	131
2021	36.4	8	44	79.9	0	80	116	8	9	133
2022	34.6	9	43	83.6	0	84	118	9	9	136
2023	35.8	11	47	93.1	0	93	129	11	9	149
2024	36.9	7	44	97.4	0	97	134	7	9	150
2025	33.3	11	44	88.7	0	89	122	11	9	142
2026	33.8	13	47	89.9	0	90	124	13	9	146
2027	32.9	12	45	90.0	0	90	123	12	9	144
2028	32.4	14	47	96.2	0	96	129	14	9	152
2029	29.9	9	39	97.3	0	97	127	9	9	145
2030	27.4	9	36	95.8	0	96	123	9	9	141

Note: California DSM is not calculated separately at the peak time. Small solar is allocated 100 percent to residential. DR is not allocated to any specific customer class.

4. COMPANY USE, LOSSES AND LOAD DURATION CURVES

Figure LF-13 shows for both the Nevada and California jurisdictions the projected Company use and losses for the period 2010 through 2030.

**FIGURE LF-13
FORECAST OF COMPANY USE AND LOSSES¹⁸**

Year	Nevada	California	Total
2010	486,925	26,343	513,268
2011	485,717	26,965	512,682
2012	517,501	28,069	545,571
2013	497,871	25,415	523,286
2014	499,919	25,417	525,336
2015	500,346	26,328	526,675
2016	525,569	28,774	554,344
2017	506,647	27,112	533,759
2018	510,936	26,973	537,908
2019	516,679	26,866	543,545
2020	546,346	28,080	574,426
2021	535,000	27,616	562,616
2022	546,586	27,430	574,016
2023	556,917	27,943	584,861
2024	593,140	30,461	623,601
2025	575,796	28,367	604,163
2026	571,762	28,291	600,053
2027	582,229	28,936	611,165
2028	623,728	31,196	654,924
2029	609,167	29,414	638,581
2030	621,472	29,948	651,419

Figure LF-14 shows the projected load duration curves for the years 2011, 2016, 2021, and 2026 for Nevada load.

¹⁸ For the 10-year period 2000 through 2009, electricity losses constituted approximately 94 percent of combined Company use and losses.

**FIGURE LF-14
LOAD DURATION CURVES
(NEVADA JURISDICTION)**

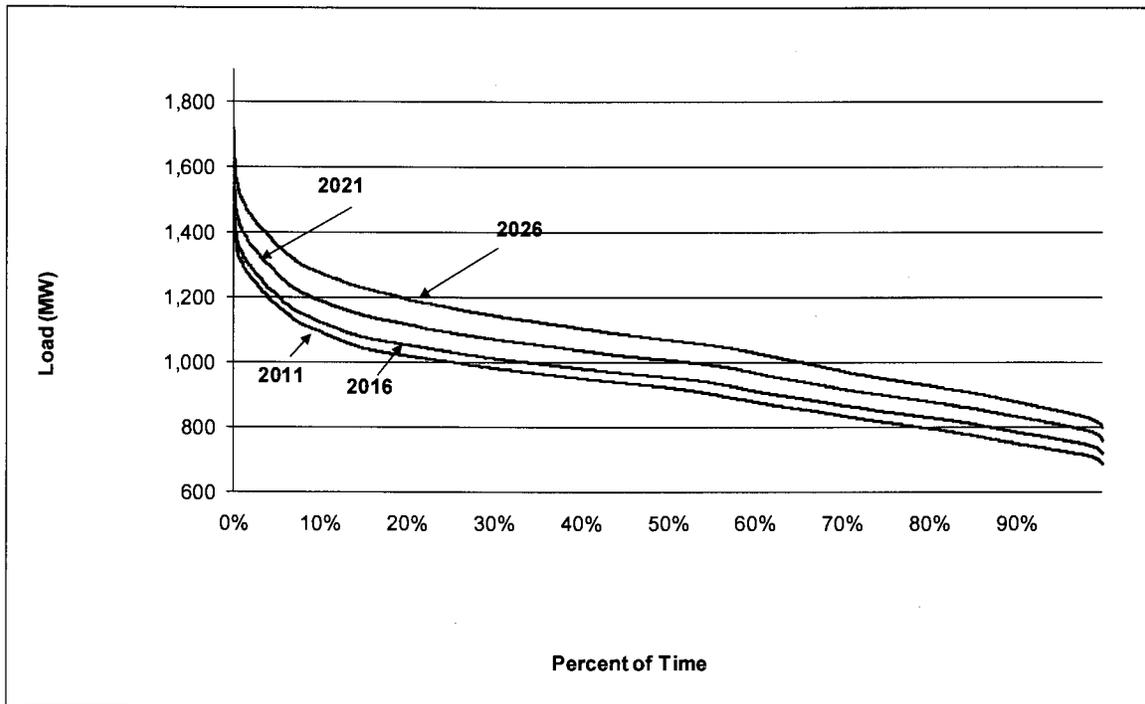
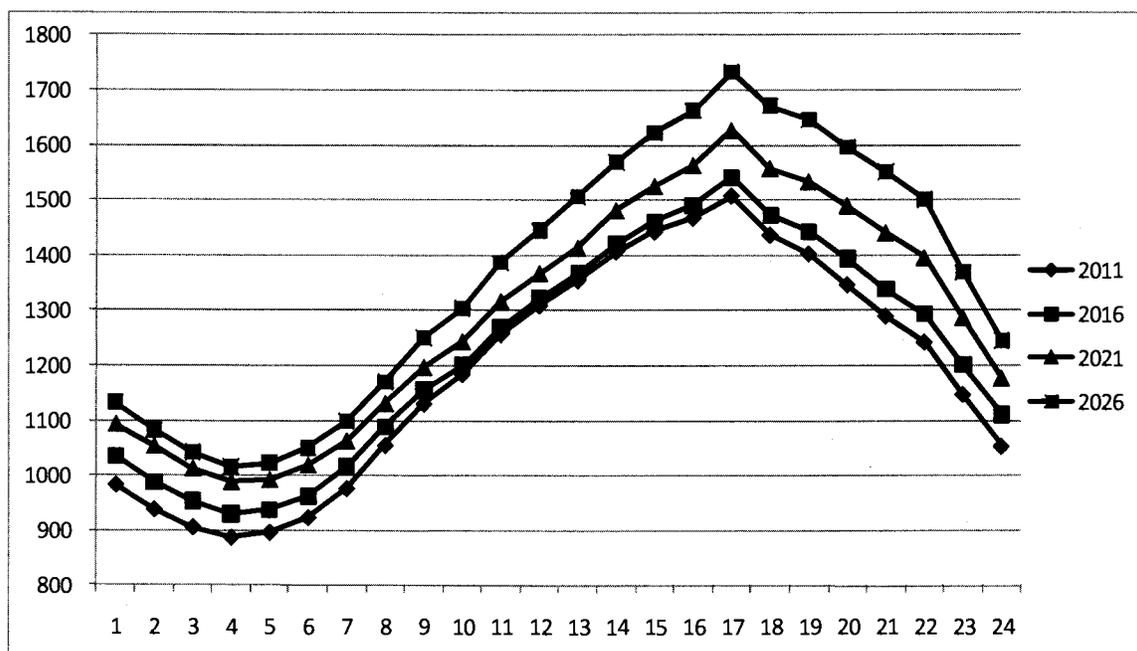


Figure LF-15 shows the Nevada peak day hourly loads for 2011, 2016, 2021 and 2026.

**FIGURE LF-15
PEAK DAY HOURLY LOADS
(NEVADA JURISDICTION)**



5. FORECAST SCENARIOS – NEVADA AND CALIFORNIA JURISDICTIONS

The Company developed base, high, and low load forecast scenarios for the Nevada and California jurisdictions. In addition, forecast scenarios taking the base load forecast and subtracting high and low DSM/DR were created per NAC 704.9475(g) and as a compliance item in Docket Nos. 08-05014 & 08-05015 ¶ 146. These forecasts are intended to test the sensitivity of changes to DSM using the base load forecast. These forecasts are named “base with high DSM” and “base with low DSM” and are discussed after the base, low and high load forecast scenarios.

The high and low load forecasts represent low probability events and were developed as follows:

1. In order expand the differential between the high, base and low forecast scenarios in the Nevada jurisdiction load forecast, results from the high load forecast scenario were paired with assumptions of low DSM and DR, and results from the low load forecast were paired with assumptions of high DSM and DR. However, it should not be assumed that DSM would actually be reduced in the high load forecast case or vice-versa. Note: These analyses used interim Nevada low and high DSM reduction estimates. See below for a discussion of the differences in the interim and final low and high Nevada DSM reduction estimates.

2. For the Nevada jurisdiction, ratios of population, real personal income, households and real gross metro product to the base case U. S. Real Gross Domestic Product (“GDP”) were applied to GI high and low GDP forecast values to develop specific high and low economic and demographic variables for the Reno MSA scenario forecasts.
3. Based on discussions with MAEs, mining load was increased by 20 MW in the high load forecast scenario and lowered by 15 MW in the low scenario.
4. For the California jurisdiction, the Nevada low and high percent deviations from the base load forecast for Nevada were applied to California total sales. The maximum deviation from the California base scenario was set at ±7 percent to reflect the different characteristics of California load -- mainly resort property and supporting businesses. Growth and declines in the California service territory are expected to be lower than the Nevada territory.

Figures LF-16A and LF-16B show summaries of the energy and peak demand for the Nevada and California low, base, and high scenarios, respectively.

**FIGURE LF-16A
ENERGY AND PEAK DEMAND
(NEVADA JURISDICTION)**

Year	Energy					Summer Peak					Summer Peak	
	Low	Base	High	Low to Base	High to Base	Low	IRP	High	Low to IRP 8th	High to IRP 8th	Low to IRP 8th	High to IRP 8th
2010	7,964	8,096	8,209	-1.6%	1.4%	1,489	1,513	1,534	-1.6%	1.4%	(24)	21
2011	7,807	8,093	8,314	-3.5%	2.7%	1,456	1,508	1,555	-3.4%	3.1%	(52)	47
2012	7,830	8,248	8,667	-5.1%	5.1%	1,453	1,526	1,604	-4.8%	5.1%	(73)	78
2013	7,803	8,262	8,725	-5.6%	5.6%	1,448	1,530	1,619	-5.4%	5.8%	(82)	89
2014	7,833	8,292	8,838	-5.5%	6.6%	1,446	1,532	1,634	-5.6%	6.7%	(86)	102
2015	7,830	8,316	8,923	-5.8%	7.3%	1,443	1,533	1,645	-5.9%	7.3%	(90)	112
2016	7,892	8,400	9,052	-6.0%	7.8%	1,449	1,542	1,660	-6.0%	7.7%	(93)	118
2017	7,893	8,423	9,110	-6.3%	8.2%	1,446	1,543	1,666	-6.3%	8.0%	(97)	123
2018	7,926	8,488	9,210	-6.6%	8.5%	1,464	1,569	1,700	-6.7%	8.3%	(105)	131
2019	7,972	8,575	9,340	-7.0%	8.9%	1,470	1,585	1,720	-7.3%	8.5%	(115)	135
2020	8,071	8,728	9,531	-7.5%	9.2%	1,480	1,603	1,744	-7.7%	8.8%	(123)	141
2021	8,170	8,866	9,698	-7.9%	9.4%	1,496	1,628	1,772	-8.1%	8.8%	(132)	144
2022	8,299	9,041	9,898	-8.2%	9.5%	1,505	1,649	1,802	-8.7%	9.3%	(144)	153
2023	8,422	9,209	10,096	-8.5%	9.6%	1,514	1,669	1,828	-9.3%	9.5%	(155)	159
2024	8,542	9,392	10,321	-9.0%	9.9%	1,546	1,715	1,881	-9.9%	9.7%	(169)	166
2025	8,597	9,500	10,462	-9.5%	10.1%	1,559	1,736	1,907	-10.2%	9.9%	(177)	171
2026	8,473	9,431	10,430	-10.2%	10.6%	1,548	1,733	1,910	-10.7%	10.2%	(185)	177
2027	8,582	9,599	10,636	-10.6%	10.8%	1,570	1,768	1,949	-11.2%	10.2%	(198)	181
2028	8,781	9,850	10,916	-10.9%	10.8%	1,583	1,794	1,982	-11.8%	10.5%	(211)	188
2029	8,906	10,022	11,110	-11.1%	10.9%	1,621	1,846	2,040	-12.2%	10.5%	(225)	194
2030	9,045	10,218	11,337	-11.5%	10.9%	1,642	1,879	2,079	-12.6%	10.6%	(237)	200
2031	9,112	10,342	11,532	-11.9%	11.5%	1,654	1,901	2,115	-13.0%	11.3%	(247)	214
2032	9,197	10,497	11,768	-12.4%	12.1%	1,665	1,924	2,151	-13.5%	11.8%	(259)	227
2033	9,239	10,594	11,939	-12.8%	12.7%	1,677	1,947	2,189	-13.9%	12.4%	(270)	242
2034	9,303	10,723	12,147	-13.2%	13.3%	1,688	1,970	2,227	-14.3%	13.0%	(282)	257
2035	9,369	10,853	12,358	-13.7%	13.9%	1,700	1,994	2,265	-14.7%	13.6%	(294)	271
2036	9,462	11,015	12,608	-14.1%	14.5%	1,712	2,018	2,304	-15.2%	14.2%	(306)	286
2037	9,501	11,118	12,792	-14.5%	15.1%	1,723	2,042	2,345	-15.6%	14.8%	(319)	303
2038	9,569	11,253	13,014	-15.0%	15.7%	1,736	2,066	2,385	-16.0%	15.4%	(330)	319
2039	9,636	11,390	13,241	-15.4%	16.3%	1,748	2,091	2,426	-16.4%	16.0%	(343)	335
2040	9,730	11,560	13,508	-15.8%	16.8%	1,763	2,116	2,470	-16.7%	16.7%	(353)	354

**FIGURE LF-16B
ENERGY AND PEAK DEMAND
(CALIFORNIA JURISDICTION)**

Year	Energy					Summer Peak				
	Low	Base	High	Low to Base	High to Base	Low	IRP	High	Low to IRP 8th	High to IRP 8th
2010	566	575	584	-1.5%	1.6%	64	65	66	-1.5%	1.5%
2011	555	573	587	-3.1%	2.6%	65	67	68	-3.0%	1.5%
2012	543	571	599	-5.0%	4.9%	63	66	68	-4.5%	3.0%
2013	537	568	599	-5.4%	5.5%	62	65	70	-4.6%	7.7%
2014	537	568	604	-5.4%	6.4%	63	64	68	-1.6%	6.3%
2015	537	570	608	-5.8%	6.7%	63	66	70	-4.5%	6.1%
2016	538	573	612	-6.1%	6.8%	63	67	72	-6.0%	7.5%
2017	537	572	612	-6.2%	7.0%	60	66	72	-9.1%	9.1%
2018	536	573	613	-6.5%	7.0%	61	65	70	-6.2%	7.7%
2019	535	574	614	-6.8%	7.1%	62	66	71	-6.1%	7.6%
2020	536	577	618	-7.1%	7.2%	63	67	71	-6.0%	6.0%
2021	539	581	622	-7.3%	7.0%	63	68	73	-7.4%	7.4%
2022	544	585	626	-6.9%	7.0%	64	68	73	-5.9%	7.4%
2023	546	589	631	-7.3%	7.1%	64	68	73	-5.9%	7.4%
2024	555	596	637	-6.8%	7.0%	64	68	73	-5.9%	7.4%
2025	555	597	639	-7.0%	7.1%	65	70	74	-7.1%	5.7%
2026	555	599	642	-7.3%	7.1%	65	71	74	-8.5%	4.2%
2027	561	603	645	-6.9%	7.0%	66	71	76	-7.0%	7.0%
2028	567	610	653	-7.1%	7.0%	65	70	75	-7.1%	7.1%
2029	569	613	656	-7.1%	7.1%	64	70	74	-8.6%	5.7%
2030	574	618	661	-7.1%	7.0%	66	71	76	-7.0%	7.0%
2031	575	624	669	-7.8%	7.3%	66	72	77	-8.3%	6.9%
2032	584	632	676	-7.5%	7.0%	67	73	78	-8.2%	6.8%
2033	584	636	681	-8.3%	7.0%	67	74	78	-9.5%	5.4%
2034	588	643	688	-8.5%	7.0%	68	75	79	-9.3%	5.3%
2035	591	649	695	-8.9%	7.1%	68	76	80	-10.5%	5.3%
2036	597	657	704	-9.2%	7.1%	68	77	81	-11.7%	5.2%
2037	599	661	709	-9.5%	7.1%	69	78	81	-11.5%	3.8%
2038	602	668	716	-9.9%	7.2%	69	79	82	-12.7%	3.8%
2039	606	674	723	-10.2%	7.2%	70	80	83	-12.5%	3.8%
2040	612	683	733	-10.4%	7.4%	68	81	82	-16.0%	1.2%

The base with high DSM and base with low DSM results are summarized in Figures 16-C and 16-D. The estimates of the Nevada jurisdiction high and low DSM used in this analysis were based on final DSM estimates. The lighting addback annual ratios were applied consistently across all three scenarios to maintain consistency for analysis of the DSM impacts. There was no change to the California jurisdiction high and low DSM estimates for this analysis vs. the high and low load forecast scenarios.

**FIGURE LF-16C (PAGE 1)
BASE LOAD FORECAST SALES WITH HIGH AND LOW DSM REDUCTIONS
(GWH)
(NEVADA AND TOTAL SYSTEM)**

Year	Total Nevada					Total Sierra				
	Low DSM	Base DSM	High DSM	% Chng vs Base		Low DSM	Base DSM	High DSM	% Chng vs Base	
				Low DSM	High DSM				Low DSM	High DSM
2010	7,600	7,600	7,600			8,157	8,157	8,157		
2011	7,606	7,599	7,594	0.1%	-0.1%	8,161	8,153	8,148	0.1%	-0.1%
2012	7,746	7,721	7,706	0.3%	-0.2%	8,299	8,274	8,259	0.3%	-0.2%
2013	7,790	7,755	7,745	0.5%	-0.1%	8,342	8,306	8,296	0.4%	-0.1%
2014	7,829	7,783	7,763	0.6%	-0.3%	8,381	8,334	8,314	0.6%	-0.2%
2015	7,864	7,806	7,777	0.7%	-0.4%	8,417	8,359	8,329	0.7%	-0.4%
2016	7,934	7,865	7,826	0.9%	-0.5%	8,488	8,419	8,380	0.8%	-0.5%
2017	7,987	7,907	7,859	1.0%	-0.6%	8,542	8,462	8,413	0.9%	-0.6%
2018	8,059	7,968	7,910	1.1%	-0.7%	8,614	8,523	8,465	1.1%	-0.7%
2019	8,152	8,049	7,982	1.3%	-0.8%	8,708	8,605	8,538	1.2%	-0.8%
2020	8,286	8,173	8,097	1.4%	-0.9%	8,844	8,731	8,654	1.3%	-0.9%
2021	8,446	8,322	8,239	1.5%	-1.0%	9,009	8,884	8,801	1.4%	-0.9%
2022	8,614	8,486	8,399	1.5%	-1.0%	9,181	9,052	8,966	1.4%	-1.0%
2023	8,766	8,643	8,557	1.4%	-1.0%	9,336	9,213	9,128	1.3%	-0.9%
2024	8,914	8,790	8,702	1.4%	-1.0%	9,488	9,364	9,277	1.3%	-0.9%
2025	9,041	8,915	8,827	1.4%	-1.0%	9,619	9,493	9,405	1.3%	-0.9%
2026	8,977	8,850	8,762	1.4%	-1.0%	9,557	9,430	9,342	1.3%	-0.9%
2027	9,136	9,008	8,919	1.4%	-1.0%	9,719	9,591	9,502	1.3%	-0.9%
2028	9,345	9,217	9,129	1.4%	-1.0%	9,933	9,805	9,717	1.3%	-0.9%
2029	9,529	9,404	9,319	1.3%	-0.9%	10,121	9,996	9,911	1.2%	-0.9%
2030	9,706	9,587	9,509	1.2%	-0.8%	10,303	10,184	10,106	1.2%	-0.8%

FIGURE LF-16C (PAGE 2)
SALES REDUCTIONS FOR LOW, BASE AND HIGH DSM (GWH)
(NEVADA SYSTEM)

Year	Sales Reductions			Lighting Addback		
	Low DSM	Base DSM	High DSM	Low DSM	Base DSM	High DSM
2010	82	82	82	0	0	0
2011	161	168	173	0	0	0
2012	217	243	258	25	25	26
2013	251	288	313	49	51	65
2014	286	334	368	49	51	65
2015	320	379	423	49	51	65
2016	354	425	478	49	51	65
2017	389	471	534	49	51	65
2018	423	515	588	49	51	65
2019	452	556	638	49	51	65
2020	457	572	663	49	51	65
2021	414	540	637	49	51	65
2022	375	505	606	49	51	65
2023	357	481	581	49	51	65
2024	360	486	587	49	51	65
2025	362	489	591	49	51	65
2026	362	490	593	49	51	65
2027	344	474	577	49	51	65
2028	291	420	523	49	51	65
2029	237	363	463	49	51	65
2030	207	327	419	49	51	65
2031	199	317	407	49	51	65
2032	190	306	393	49	51	65

**FIGURE LF-16D
BASE LOAD FORECAST ENERGY (GWH) AND PEAK DEMAND WITH HIGH
AND LOW DSM (MW)
(TOTAL SYSTEM)**

Year	Peak Demand					SYSTEM ENERGY				
	Low DSM	Base DSM	High DSM	Pct Diff vs Base		Low DSM	Base DSM	High DSM	Pct Diff vs Base	
				Low DSM	High DSM				Low DSM	High DSM
2010	1,578	1,578	1,578			8,671	8,671	8,671		
2011	1,577	1,575	1,574	0.1%	-0.1%	8,674	8,666	8,661	0.1%	-0.1%
2012	1,601	1,592	1,593	0.6%	0.1%	8,846	8,819	8,803	0.3%	-0.2%
2013	1,607	1,595	1,589	0.8%	-0.4%	8,868	8,830	8,819	0.4%	-0.1%
2014	1,611	1,596	1,587	0.9%	-0.6%	8,910	8,860	8,839	0.6%	-0.2%
2015	1,617	1,599	1,588	1.1%	-0.7%	8,947	8,886	8,854	0.7%	-0.4%
2016	1,629	1,609	1,596	1.2%	-0.8%	9,047	8,973	8,931	0.8%	-0.5%
2017	1,632	1,609	1,593	1.4%	-1.0%	9,081	8,995	8,944	1.0%	-0.6%
2018	1,661	1,634	1,616	1.7%	-1.1%	9,159	9,061	8,999	1.1%	-0.7%
2019	1,680	1,651	1,629	1.8%	-1.3%	9,259	9,149	9,077	1.2%	-0.8%
2020	1,699	1,670	1,648	1.7%	-1.3%	9,427	9,305	9,224	1.3%	-0.9%
2021	1,728	1,696	1,673	1.9%	-1.4%	9,580	9,447	9,358	1.4%	-0.9%
2022	1,750	1,717	1,693	1.9%	-1.4%	9,764	9,626	9,534	1.4%	-1.0%
2023	1,772	1,737	1,709	2.0%	-1.6%	9,930	9,798	9,707	1.3%	-0.9%
2024	1,820	1,783	1,755	2.1%	-1.6%	10,121	9,987	9,894	1.3%	-0.9%
2025	1,841	1,806	1,779	1.9%	-1.5%	10,231	10,097	10,003	1.3%	-0.9%
2026	1,839	1,804	1,778	1.9%	-1.4%	10,166	10,030	9,936	1.4%	-0.9%
2027	1,874	1,839	1,812	1.9%	-1.5%	10,339	10,202	10,108	1.3%	-0.9%
2028	1,901	1,864	1,834	2.0%	-1.6%	10,598	10,460	10,365	1.3%	-0.9%
2029	1,954	1,916	1,885	2.0%	-1.6%	10,769	10,635	10,544	1.3%	-0.9%
2030	1,988	1,950	1,921	1.9%	-1.5%	10,963	10,836	10,752	1.2%	-0.8%

**6. COMPARISON OF THE INTERIM AND FINAL HIGH AND LOW FORECASTS
AND DSM REDUCTION ESTIMATES**

Figures LF-16E, LF-16F and LF-16G compare the sales and peak demand differences for interim and final Nevada jurisdiction DSM reduction estimates. The base California jurisdiction DSM was used in both analyses, as there are no separate estimates of high and low California DSM. As can be seen, the differences in total sales and peak demand between the interim high/low DSM used to prepare the analysis in this filing and the final high/low DSM are immaterial.

**FIGURE LF-16E
DIFFERENCE IN SCENARIO SALES FORECASTS BETWEEN INTERIM AND
FINAL HIGH AND LOW DSM FORECASTS (GWH)
(NEVADA JURISDICTION)**

Year	Low Sales Forecast (including Resale)				High Sales Forecast (including Resale)			
	Interim DSM	Final DSM	Interim less Final	%Interim vs Final	Interim DSM	Final DSM	Interim less Final	%Interim vs Final
2010	8,026	8,010	16	0.2%	8,286	8,302	-16	-0.2%
2011	7,870	7,841	-29	-0.4%	8,386	8,413	26	0.3%
2012	7,857	7,830	-27	-0.3%	8,689	8,724	35	0.4%
2013	7,849	7,840	-8	-0.1%	8,747	8,786	39	0.4%
2014	7,877	7,849	-28	-0.4%	8,836	8,856	19	0.2%
2015	7,874	7,826	-48	-0.6%	8,899	8,917	17	0.2%
2016	7,913	7,865	-47	-0.6%	9,001	9,016	15	0.2%
2017	7,933	7,885	-47	-0.6%	9,079	9,092	13	0.1%
2018	7,963	7,916	-46	-0.6%	9,174	9,185	11	0.1%
2019	8,005	7,960	-45	-0.6%	9,296	9,304	8	0.1%
2020	8,079	8,039	-40	-0.5%	9,448	9,448	0	0.0%
2021	8,193	8,166	-26	-0.3%	9,619	9,602	-17	-0.2%
2022	8,319	8,303	-16	-0.2%	9,812	9,783	-29	-0.3%
2023	8,436	8,424	-12	-0.1%	9,997	9,969	-28	-0.3%
2024	8,533	8,521	-12	-0.1%	10,183	10,155	-28	-0.3%
2025	8,609	8,597	-12	-0.1%	10,345	10,316	-29	-0.3%
2026	8,492	8,480	-11	-0.1%	10,316	10,286	-30	-0.3%
2027	8,600	8,593	-8	-0.1%	10,512	10,478	-34	-0.3%
2028	8,766	8,769	3	0.0%	10,750	10,705	-45	-0.4%
2029	8,911	8,922	11	0.1%	10,965	10,912	-53	-0.5%
2030	9,045	9,057	11	0.1%	11,182	11,128	-54	-0.5%

**FIGURE LF-16F
COMPARISON OF INTERIM AND FINAL DSM SALES REDUCTIONS (GWH)
(NEVADA JURISDICTION)**

Year	SALES REDUCTION				LIGHTING ADDBACK			
	Low DSM/High Sales		High DSM/Low Sales		Low DSM/High Sales		High DSM/Low Sales	
	Interim DSM	Final DSM						
2010	66	82	99	82	0	0	0	0
2011	134	161	201	173	0	0	0	0
2012	194	217	291	258	12	10	20	25
2013	230	251	345	313	30	26	40	49
2014	267	286	401	368	49	42	61	74
2015	303	320	455	423	49	42	81	98
2016	340	354	510	478	49	42	81	98
2017	377	389	565	534	49	42	81	98
2018	412	423	618	588	49	42	81	98
2019	445	452	668	638	49	42	81	98
2020	458	457	686	663	49	42	81	98
2021	432	414	648	637	49	42	81	98
2022	404	375	606	606	49	42	81	98
2023	385	357	577	581	49	42	81	98
2024	389	360	583	587	49	42	81	98
2025	391	362	587	591	49	42	81	98
2026	392	362	589	593	49	42	81	98
2027	379	344	569	577	49	42	81	98
2028	336	291	504	523	49	42	81	98
2029	291	237	436	463	49	42	81	98
2030	261	207	392	419	49	42	81	98

REDACTED PUBLIC VERSION

Year	Sales Reductions					Lighting Addback				
	Low DSM		Base DSM	High DSM		Low DSM		Base DSM	High DSM	
	Interim	Final		Interim	Final	Interim	Final		Interim	Final
2010	66	82	82	99	82	0	0	0	0	0
2011	134	161	168	201	173	0	0	0	0	0
2012	194	217	243	291	258	12	25	25	20	26
2013	230	251	288	345	313	30	49	51	40	65
2014	267	286	334	401	368	49	49	51	61	65
2015	303	320	379	455	423	49	49	51	81	65
2016	340	354	425	510	478	49	49	51	81	65
2017	377	389	471	565	534	49	49	51	81	65
2018	412	423	515	618	588	49	49	51	81	65
2019	445	452	556	668	638	49	49	51	81	65
2020	458	457	572	686	663	49	49	51	81	65
2021	432	414	540	648	637	49	49	51	81	65
2022	404	375	505	606	606	49	49	51	81	65
2023	385	357	481	577	581	49	49	51	81	65
2024	389	360	486	583	587	49	49	51	81	65
2025	391	362	489	587	591	49	49	51	81	65
2026	392	362	490	589	593	49	49	51	81	65
2027	379	344	474	569	577	49	49	51	81	65
2028	336	291	420	504	523	49	49	51	81	65
2029	291	237	363	436	463	49	49	51	81	65
2030	261	207	327	392	419	49	49	51	81	65

**FIGURE LF-16G
COMPARISON OF INTERIM AND FINAL HIGH AND LOW PEAK DEMAND
REDUCTIONS (MW) (NEVADA JURISDICTION)**

Year	PEAK DEMAND ANALYSIS: LOW DSM						PEAK DEMAND ANALYSIS: HIGH DSM					
	Low DSM/High Sales						High DSM/Low Sales					
	Interim DSM	Final DSM	Interim less Final	DR Diff (1)	Interim Peak (2)	Final Peak	Interim DSM	Final DSM	Interim less Final	DR Diff	Interim Peak (3)	Final Peak
2010	12.1	12.1	0.0	0.0	1,600	1,600	16.5	12.1	4.4	0.0	1,553	1,557
2011	21.0	23.2	-2.2	-5.0	1,623	1,616	29.8	25.4	4.4	0.0	1,521	1,525
2012	33.1	32.0	1.1	-5.0	1,672	1,668	46.3	37.5	8.8	0.0	1,516	1,525
2013	41.9	41.9	0.0	-5.0	1,689	1,684	60.7	56.3	4.4	0.0	1,510	1,514
2014	56.3	50.7	5.5	-5.0	1,702	1,703	68.4	70.6	-2.2	0.0	1,509	1,507
2015	65.1	59.6	5.5	-5.0	1,715	1,716	80.5	84.9	-4.4	0.0	1,506	1,502
2016	72.8	67.3	5.5	-5.0	1,732	1,733	100.4	97.1	3.3	0.0	1,512	1,515
2017	86.0	77.2	8.8	-5.0	1,738	1,742	114.7	111.4	3.3	0.0	1,506	1,509
2018	89.3	86.0	3.3	-5.0	1,770	1,768	130.2	127.9	2.2	0.0	1,525	1,527
2019	98.2	92.7	5.5	-5.0	1,791	1,792	141.2	140.1	1.1	0.0	1,532	1,533
2020	110.3	97.1	13.2	-5.0	1,815	1,823	136.8	135.7	1.1	0.0	1,543	1,544
2021	101.5	88.2	13.2	-5.0	1,845	1,853	139.0	139.0	0.0	0.0	1,559	1,559
2022	112.5	99.3	13.2	-5.0	1,875	1,883	142.3	142.3	0.0	0.0	1,569	1,569
2023	113.6	98.2	15.4	-5.0	1,901	1,911	142.3	144.5	-2.2	0.0	1,578	1,576
2024	113.6	101.5	12.1	-5.0	1,954	1,961	161.0	163.2	-2.2	0.0	1,610	1,608
2025	114.7	102.6	12.1	-5.0	1,981	1,988	147.8	150.0	-2.2	0.0	1,624	1,622
2026	126.8	102.6	24.3	-5.0	1,984	2,003	147.8	150.0	-2.2	0.0	1,613	1,611
2027	110.3	91.5	18.8	-5.0	2,025	2,039	146.7	150.0	-3.3	0.0	1,636	1,633
2028	116.9	96.0	21.0	-5.0	2,057	2,073	142.3	158.8	-16.5	0.0	1,648	1,631
2029	110.3	92.7	17.6	-5.0	2,114	2,127	152.2	157.7	-5.5	0.0	1,685	1,679
2030	107.0	89.3	17.6	-5.0	2,155	2,168	147.8	152.2	-4.4	0.0	1,708	1,704

(1) Assumed to be 0 in the high sales/low DSM scenario.
(2) As filed. Used for High Load Forecast scenario analysis.
(3) As filed. Used for Low Load Forecast scenario analysis.

7. COMPARISON OF THE IRP FORECAST AND 8TH AMENDMENT LOAD FORECAST: NEVADA AND CALIFORNIA

Figure LF-17 compares annual growth rates for real gross metro product, households, real personal income and population IRP forecast and the 8th Amendment forecast.

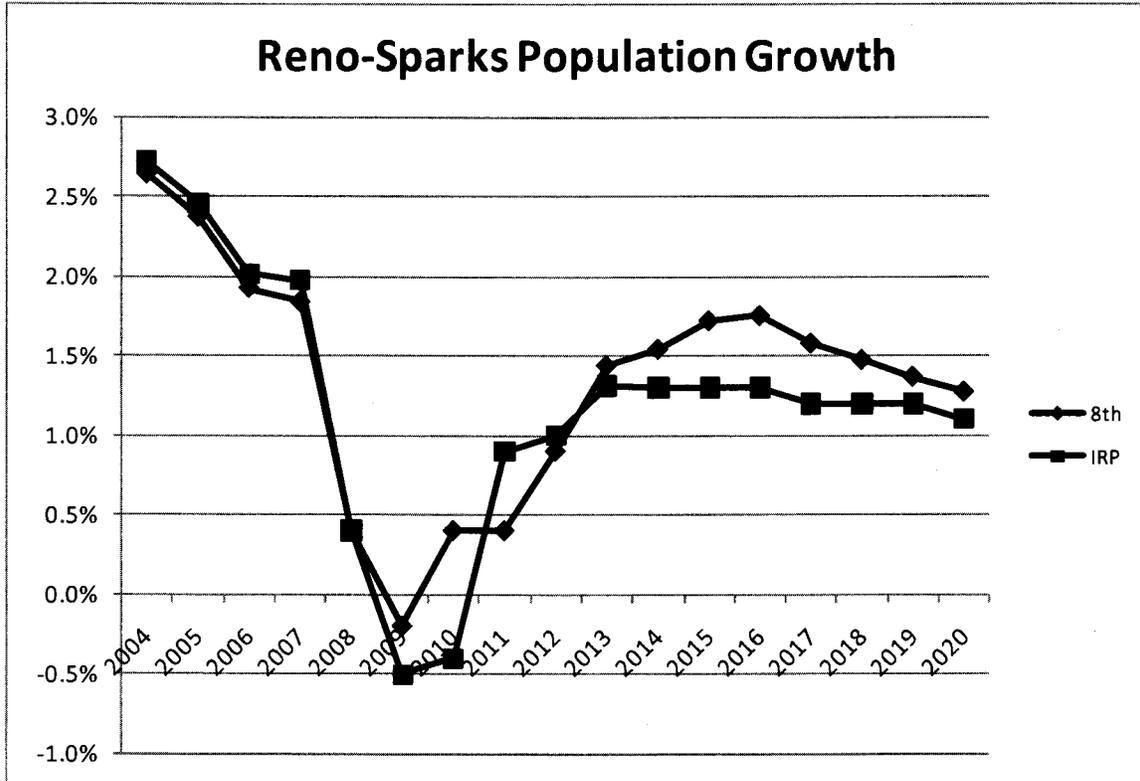
**FIGURE LF-17
COMPARISON OF ECONOMIC DATA IRP FORECAST VERSUS 8th
AMENDMENT FORECAST (NEVADA JURISDICTION)¹⁹**

	Real GMP		Population		Real Pers. Income		Households	
	8th	IRP	8th	IRP	8th	IRP	8th	IRP
2004	7.2%	7.2%	2.6%	2.7%	8.6%	8.6%	2.3%	2.3%
2005	3.7%	3.7%	2.4%	2.5%	4.0%	4.0%	2.5%	2.5%
2006	3.3%	3.3%	1.9%	2.0%	1.4%	1.4%	2.1%	2.1%
2007	2.1%	2.1%	1.8%	2.0%	4.3%	4.3%	0.9%	0.7%
2008	-2.9%	-2.9%	0.4%	0.4%	-2.4%	-2.4%	0.2%	-1.0%
2009	-5.5%	-5.3%	-0.2%	-0.5%	-6.3%	-5.3%	0.8%	-0.8%
2010	1.2%	1.3%	0.4%	-0.4%	-1.2%	0.4%	1.2%	0.4%
2011	2.6%	2.1%	0.4%	0.9%	0.9%	1.1%	1.5%	1.0%
2012	3.6%	3.4%	0.9%	1.0%	3.0%	2.7%	1.4%	1.1%
2013	2.9%	3.1%	1.4%	1.3%	3.9%	3.7%	1.4%	1.3%
2014	2.7%	2.7%	1.5%	1.3%	3.6%	3.8%	1.5%	1.5%
2015	2.7%	2.5%	1.7%	1.3%	3.1%	3.1%	1.7%	1.7%
2016	2.8%	2.6%	1.8%	1.3%	3.2%	3.1%	1.9%	1.8%
2017	2.8%	2.9%	1.6%	1.2%	3.1%	3.2%	1.9%	1.9%
2018	2.9%	3.0%	1.5%	1.2%	3.2%	3.3%	1.9%	1.8%
2019	3.2%	3.2%	1.4%	1.2%	3.5%	3.6%	2.0%	1.9%
2020	3.2%	3.2%	1.3%	1.1%	3.5%	3.8%	2.1%	2.0%

Annual growth rates are more comparable between the two forecasts, due to historical data adjustments to nominal values by governmental entities as more complete data become available. The growth rates for population are generally lower in the IRP forecast. Other variables are similar as between the two forecasts. Figure LF-18 summarizes graphically the changes in population.

¹⁹ January 2010 GI data was used for California vs. February 2010 GI data for Nevada.

FIGURE LF-18
COMPARISON OF ANNUAL GROWTH RATES OF NEVADA ECONOMIC
VARIABLES USED IN THE LOAD FORECASTING MODELS
IRP FORECAST VERSUS 8TH AMENDMENT FORECAST



Higher DSM, the new DR pilot program, higher reductions to the small solar, wind and hydro programs and lower population growth account for changes in the Nevada IRP forecast compared to the 8th Amendment forecast. The IRP forecast is higher in the very near term as the variance of actual system energy through April 2010 was 2.7 percent as compared to the 8th Amendment forecast. In the longer term, higher DSM and lower population forecasts reduce the IRP forecast compared to the 8th Amendment forecast. Figure LF-19 summarizes the load forecast changes.

**FIGURE LF-19
FORECAST OF NEVADA SALES AND PEAK DEMAND
IRP FORECAST VERSUS 8TH AMENDMENT FORECAST**

Year	MW	Weather Adjusted Peaks				GWH	Weather Adjusted Sales			
	Record ed Peaks	IRP	8th Amend.	Change	% Change		Year	IRP	8th Amend.	Change
2007	N/A	N/A				2007	8,247			
2008	N/A	N/A				2008	8,114			
2009	N/A	N/A				2009	7,616			
2010		1,513	1,506	7	0.5%	2010	7,609	7,551	58	0.8%
2011		1,508	1,491	17	1.1%	2011	7,608	7,527	80	1.1%
2012		1,526	1,507	19	1.2%	2012	7,730	7,642	89	1.2%
2013		1,530	1,520	10	0.6%	2013	7,764	7,721	43	0.6%
2014		1,532	1,534	-2	-0.1%	2014	7,792	7,826	-34	-0.4%
2015		1,533	1,550	-17	-1.1%	2015	7,816	7,935	-120	-1.5%
2020		1,603	1,649	-46	-2.8%	2020	8,182	8,558	-376	-4.4%
2025		1,736	1,778	-42	-2.3%	2025	8,924	9,208	-284	-3.1%
2030		1,879	1,902	-23	-1.2%	2030	9,597	9,679	-83	-0.9%

D. FORECAST RESULTS - TOTAL SYSTEM

The forecast results for Sierra’s total system (Nevada and California jurisdictions) are summarized below.

1. SALES, PEAK DEMAND, RESIDENTIAL CUSTOMERS AND POPULATION

Figures LF-20A and LF-20B show the class calendar year sales forecast, after and before reductions for incremental DSM and small solar installations for the entire Sierra system. Average annual compound sales growth after DSM reductions averages 0.8 percent from 2010 through 2015. From 2015 to 2030, average annual compound sales growth averages 1.3 percent. Figure LF-21 shows the sales forecast by season after the reductions for incremental DSM and small solar installations.

**FIGURE LF-20A
CALENDAR SALES FORECAST (GWH) INCLUDING RESALE²⁰ SALES
AFTER DSM AND SMALL SOLAR REDUCTIONS
(TOTAL SYSTEM)**

Year	Residential	Small C&I	Large C&I	Street Lighting	Resale	Total	Growth
2010	2,417	3,084	2,626	16	15	8,157	0.0%
2011	2,408	3,084	2,631	16	15	8,153	0.0%
2012	2,425	3,095	2,722	16	15	8,274	1.5%
2013	2,440	3,107	2,728	16	15	8,306	0.4%
2014	2,448	3,123	2,732	17	15	8,334	0.3%
2015	2,450	3,142	2,735	17	15	8,359	0.3%
2016	2,474	3,174	2,739	17	15	8,419	0.7%
2017	2,484	3,200	2,745	17	15	8,462	0.5%
2018	2,507	3,230	2,754	18	15	8,523	0.7%
2019	2,544	3,264	2,764	18	15	8,605	1.0%
2020	2,603	3,317	2,778	18	15	8,731	1.5%
2021	2,686	3,373	2,792	18	15	8,884	1.8%
2022	2,780	3,433	2,806	19	15	9,052	1.9%
2023	2,856	3,502	2,821	19	15	9,213	1.8%
2024	2,915	3,578	2,837	19	15	9,364	1.6%
2025	2,953	3,650	2,855	19	15	9,493	1.4%
2026	3,000	3,726	2,670	19	15	9,430	-0.7%
2027	3,065	3,802	2,690	20	15	9,591	1.7%
2028	3,175	3,886	2,710	20	15	9,805	2.2%
2029	3,268	3,963	2,731	20	15	9,996	1.9%
2030	3,350	4,046	2,753	20	15	10,184	1.9%

²⁰ Resale sales include system sales to Plumas County (California), the Hawthorne Army Depot and Pacific Gas & Electric Company (California).

**FIGURE LF-20B
CALENDAR SALES FORECAST (GWH) INCLUDING RESALE SALES
BEFORE DSM AND SMALL SOLAR REDUCTIONS
(TOTAL SYSTEM)**

Year	Residential	Small C&I	Large C&I	Street Lighting	Resale	Total
2010	2,479	3,105	2,633	16	15	8,248
2011	2,536	3,125	2,646	16	15	8,339
2012	2,579	3,161	2,747	16	15	8,518
2013	2,589	3,199	2,762	16	15	8,582
2014	2,618	3,240	2,775	17	15	8,665
2015	2,640	3,283	2,787	17	15	8,743
2016	2,683	3,340	2,801	17	15	8,856
2017	2,712	3,391	2,817	17	15	8,953
2018	2,754	3,446	2,834	18	15	9,066
2019	2,804	3,506	2,854	18	15	9,197
2020	2,860	3,576	2,875	18	15	9,345
2021	2,906	3,640	2,891	18	15	9,470
2022	2,958	3,708	2,908	19	15	9,608
2023	3,011	3,780	2,925	19	15	9,750
2024	3,076	3,859	2,942	19	15	9,910
2025	3,120	3,933	2,961	19	15	10,048
2026	3,174	4,009	2,776	19	15	9,993
2027	3,227	4,086	2,796	20	15	10,143
2028	3,287	4,170	2,816	20	15	10,307
2029	3,327	4,247	2,837	20	15	10,446
2030	3,377	4,330	2,859	20	15	10,601

**FIGURE LF-21
RETAIL SEASONAL SALES FORECAST (GWH)
AFTER DSM AND SMALL SOLAR REDUCTIONS
(TOTAL SYSTEM)**

Year	Residential		Small C&I		Large C&I		Street Lighting		Total Nevada		California		Total System	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
2010	578	1,576	849	2,071	669	1,841	3	12	2,099	5,500	121	422	2,221	5,922
2011	577	1,568	850	2,073	671	1,845	3	12	2,101	5,498	121	419	2,222	5,917
2012	580	1,584	848	2,086	693	1,914	3	12	2,125	5,597	120	417	2,245	6,014
2013	582	1,596	855	2,093	696	1,916	4	13	2,137	5,618	120	416	2,258	6,034
2014	582	1,604	859	2,105	698	1,918	4	13	2,142	5,641	120	417	2,262	6,057
2015	580	1,607	865	2,120	698	1,920	4	13	2,146	5,661	120	417	2,266	6,078
2016	583	1,625	871	2,146	697	1,925	4	13	2,156	5,710	120	418	2,276	6,128
2017	586	1,631	879	2,165	701	1,928	4	13	2,170	5,738	121	419	2,290	6,156
2018	590	1,650	886	2,189	703	1,934	4	13	2,182	5,786	121	419	2,304	6,205
2019	597	1,678	897	2,213	706	1,942	4	14	2,203	5,846	121	420	2,324	6,266
2020	608	1,723	908	2,255	708	1,954	4	14	2,227	5,945	121	422	2,349	6,367
2021	629	1,782	925	2,294	713	1,962	4	14	2,271	6,051	123	425	2,394	6,476
2022	652	1,849	941	2,337	717	1,972	4	14	2,314	6,171	124	428	2,438	6,599
2023	672	1,903	958	2,388	721	1,983	4	14	2,354	6,289	124	431	2,479	6,720
2024	686	1,944	979	2,442	725	1,995	4	14	2,395	6,395	125	434	2,520	6,829
2025	696	1,970	999	2,493	730	2,008	4	15	2,429	6,486	126	437	2,555	6,923
2026	708	2,004	1,020	2,548	680	1,872	4	15	2,412	6,438	126	439	2,539	6,877
2027	724	2,050	1,040	2,602	686	1,886	4	15	2,455	6,553	127	441	2,582	6,995
2028	750	2,130	1,059	2,666	689	1,903	4	15	2,503	6,715	128	445	2,631	7,160
2029	776	2,194	1,081	2,721	696	1,916	4	15	2,558	6,846	129	448	2,687	7,294

Figure LF-22A shows the energy and peak forecast through 2040 adjusted for DSM and small solar load reduction programs. Figure LF-22B shows the same forecast through 2030 before the reductions.

FIGURE LF-22A
SYSTEM ENERGY (GWH)²¹ AND PEAK DEMAND FORECAST (MW)²²
(TOTAL SYSTEM)

Year	Energy GWhs	Summer Peak MW	Winter Peak MW
2010	8,671	1,578	1,315
2011	8,666	1,575	1,312
2012	8,819	1,592	1,316
2013	8,830	1,595	1,335
2014	8,860	1,596	1,344
2015	8,886	1,599	1,349
2016	8,973	1,609	1,361
2017	8,995	1,609	1,366
2018	9,061	1,634	1,365
2019	9,149	1,651	1,393
2020	9,305	1,670	1,421
2021	9,447	1,696	1,457
2022	9,626	1,717	1,492
2023	9,798	1,737	1,522
2024	9,987	1,783	1,550
2025	10,097	1,806	1,577
2026	10,030	1,804	1,577
2027	10,202	1,839	1,606
2028	10,460	1,864	1,649
2029	10,635	1,916	1,675
2030	10,836	1,950	1,724
2031	10,966	1,973	1,745
2032	11,129	1,997	1,766
2033	11,230	2,021	1,787
2034	11,365	2,045	1,808
2035	11,501	2,070	1,830
2036	11,673	2,095	1,852
2037	11,779	2,120	1,874
2038	11,921	2,145	1,896
2039	12,064	2,171	1,919
2040	12,243	2,197	1,942

²¹ Includes retail sales and losses/Company use, and is net of incremental DSM and small solar project reductions.

²² Net of incremental DSM and small solar project reductions.

**FIGURE LF-22B
SYSTEM ENERGY (GWH)²³ AND PEAK DEMAND FORECAST (MW)²⁴
BEFORE DSM, DR AND SMALL SOLAR, WIND AND HYDRO REDUCTIONS
(TOTAL SYSTEM)**

Year	Energy				Summer Peak			
	Gross, w/o incremental DSM, Solar & IRR TOU	Less: incremental DSM, Solar	Less: DR	Net of incremental DSM, Solar & IRR TOU	Gross, w/o incremental DSM, Solar & IRR TOU	Less: incremental DSM & Solar	Less: DR	Net of incremental DSM, Solar & DR
2010	8,764	93	0	8,671	1,591	13	0	1,578
2011	8,856	190	0	8,666	1,605	25	5	1,575
2012	9,097	277	0	8,819	1,640	41	7	1,592
2013	9,163	333	0	8,830	1,657	53	9	1,595
2014	9,248	388	0	8,860	1,674	69	9	1,596
2015	9,329	443	0	8,886	1,689	81	9	1,599
2016	9,473	500	0	8,973	1,707	89	9	1,609
2017	9,550	554	0	8,995	1,721	103	9	1,609
2018	9,669	608	0	9,061	1,756	113	9	1,634
2019	9,808	659	0	9,149	1,782	122	9	1,651
2020	9,989	684	0	9,305	1,801	122	9	1,670
2021	10,102	655	0	9,447	1,829	124	9	1,696
2022	10,251	625	0	9,626	1,853	127	9	1,717
2023	10,404	606	0	9,798	1,886	140	9	1,737
2024	10,607	620	0	9,987	1,933	141	9	1,783
2025	10,725	628	0	10,097	1,948	133	9	1,806
2026	10,667	636	0	10,030	1,950	137	9	1,804
2027	10,828	626	0	10,202	1,983	135	9	1,839
2028	11,037	577	0	10,460	2,016	143	9	1,864
2029	11,157	522	0	10,635	2,061	136	9	1,916
2030	11,325	490	0	10,836	2,091	132	9	1,950

2. CUSTOMER CLASS SUMMER AND WINTER PEAK FORECAST

Figure LF-23 shows forecasted peaks disaggregated by customer class (residential, commercial, and industrial).

²³ Includes retail sales and losses/Company use, and is net of incremental DSM and small solar project reductions.

²⁴ Net of incremental DSM and small solar project reductions.

**FIGURE LF-23
CLASS COINCIDENT PEAK FORECAST (MW)²⁵
(TOTAL SYSTEM)**

Year	Residential		Small Commercial & Industrial		Large Commercial & Industrial		Street Lighting		Resale	
	Summer Peak	Winter Peak	Summer Peak	Winter Peak	Summer Peak	Winter Peak	Summer Peak	Winter Peak	Summer Peak	Winter Peak
2010	516	501	589	356	339	301	0	4	1	2
2011	554	501	565	370	337	303	0	4	1	2
2012	576	461	556	398	354	313	0	4	1	2
2013	567	509	581	372	351	316	0	4	1	2
2014	545	522	613	379	357	319	0	4	1	2
2015	579	532	596	386	354	321	0	4	1	2
2016	587	541	603	403	357	323	0	4	1	2
2017	587	546	611	414	360	322	0	4	1	2
2018	605	548	621	420	365	323	0	4	1	2
2019	616	575	635	418	363	326	0	4	1	2
2020	636	587	624	426	371	329	0	4	1	2
2021	634	597	654	434	369	330	0	4	1	2
2022	639	603	666	453	373	333	0	4	1	2
2023	654	607	680	467	375	331	0	5	1	2
2024	677	625	699	463	375	334	0	5	1	2
2025	696	638	686	471	382	336	0	5	1	2
2026	709	648	700	481	358	315	0	5	1	2
2027	707	659	733	491	356	316	0	5	1	2
2028	717	658	749	517	361	317	0	5	1	2
2029	737	657	763	525	366	318	0	5	1	2

3. DSM, DR, AND SMALL SOLAR, WIND AND HYDRO REDUCTIONS

Figure LF-24 is a summary of the annual energy reductions for DSM, DR and small solar, wind and hydro projects.²⁶ Figure LF-25 is a summary of the peak demand effects of the same programs.

²⁵ The values in the table are at the meter and do not include reductions for DSM or small solar projects.

²⁶ The values reported are for Nevada only.

**FIGURE LF-24
DSM AND SMALL SOLAR, WIND AND HYDRO REDUCTIONS BY
CUSTOMER CLASS (GWH)
(TOTAL SYSTEM)**

Year	Residential		Small C&I	Total		
	DSM	Small Solar	DSM	DSM	Small Solar	All
2010	57	5	29	86	5	91
2011	115	11	57	172	11	183
2012	157	17	91	248	17	265
2013	168	25	126	294	25	319
2014	181	31	160	341	31	372
2015	192	38	194	386	38	424
2016	205	44	228	433	44	477
2017	217	51	262	480	51	530
2018	228	57	297	525	57	582
2019	235	63	331	567	63	630
2020	226	70	356	582	70	652
2021	183	76	366	549	76	625
2022	137	82	377	514	82	597
2023	109	89	382	490	89	579
2024	110	95	386	495	95	591
2025	111	102	388	499	102	601
2026	112	108	389	502	108	610
2027	94	114	390	484	114	598
2028	39	121	390	429	121	550
2029	-17	127	390	373	127	500
2030	-86	133	390	304	133	437

Note: These reductions are at the meter.

**FIGURE LF-25
DSM AND SMALL SOLAR, WIND AND HYDRO PEAK REDUCTIONS BY
CUSTOMER CLASS ADJUSTED FOR LOSSES (MW) (NEVADA
JURISDICTION)**

Year	Residential			Small Commercial & Industrial			Total			
	DSM	Small Solar	Total	DSM	Small Solar	Total	DSM	Small Solar	DR	Total
2010	5.5	1	7	6.4	0	6	12	1	0	13
2011	11.5	1	13	12.4	0	12	24	1	5	30
2012	18.3	2	20	20.5	0	21	39	2	7	48
2013	22.1	2	24	28.7	0	29	51	2	9	62
2014	26.7	4	31	37.9	0	38	65	4	9	78
2015	29.8	7	36	44.6	0	45	74	7	9	90
2016	32.6	6	38	50.9	0	51	83	6	9	98
2017	36.7	7	43	59.6	0	60	96	7	9	112
2018	40.4	3	44	69.2	0	69	110	3	9	122
2019	41.0	4	45	76.6	0	77	118	4	9	131
2020	37.5	9	46	75.7	0	76	113	9	9	131
2021	36.4	8	44	79.9	0	80	116	8	9	133
2022	34.6	9	43	83.6	0	84	118	9	9	136
2023	35.8	11	47	93.1	0	93	129	11	9	149
2024	36.9	7	44	97.4	0	97	134	7	9	150
2025	33.3	11	44	88.7	0	89	122	11	9	142
2026	33.8	13	47	89.9	0	90	124	13	9	146
2027	32.9	12	45	90.0	0	90	123	12	9	144
2028	32.4	14	47	96.2	0	96	129	14	9	152
2029	29.9	9	39	97.3	0	97	127	9	9	145
2030	27.4	9	36	95.8	0	96	123	9	9	141

Note: California DSM is not calculated separately at the peak time. Small solar, wind and hydro are allocated 100 percent to residential. DR is not allocated to any specific customer class.

4. COMPANY USE, LOSSES AND LOAD DURATION CURVES

Figure LF-26 shows the projected Company use and losses for the period 2010 through 2030.

**FIGURE LF-26
FORECAST OF COMPANY USE AND LOSSES²⁷
(TOTAL SYSTEM)**

Year	MWhs
2010	513,268
2011	512,682
2012	545,571
2013	523,286
2014	525,336
2015	526,675
2016	554,344
2017	533,759
2018	537,908
2019	543,545
2020	574,426
2021	562,616
2022	574,016
2023	584,861
2024	623,601
2025	604,163
2026	600,053
2027	611,165
2028	654,924
2029	638,581
2030	651,419

Figure LF-27 shows the projected system load duration curves for the years 2011, 2016, 2021, and 2026.

²⁷ For the 10-year period 2000 through 2009, electricity losses constituted approximately 94 percent of combined Company use.

**FIGURE LF-27
LOAD DURATION CURVE
(TOTAL SYSTEM)**

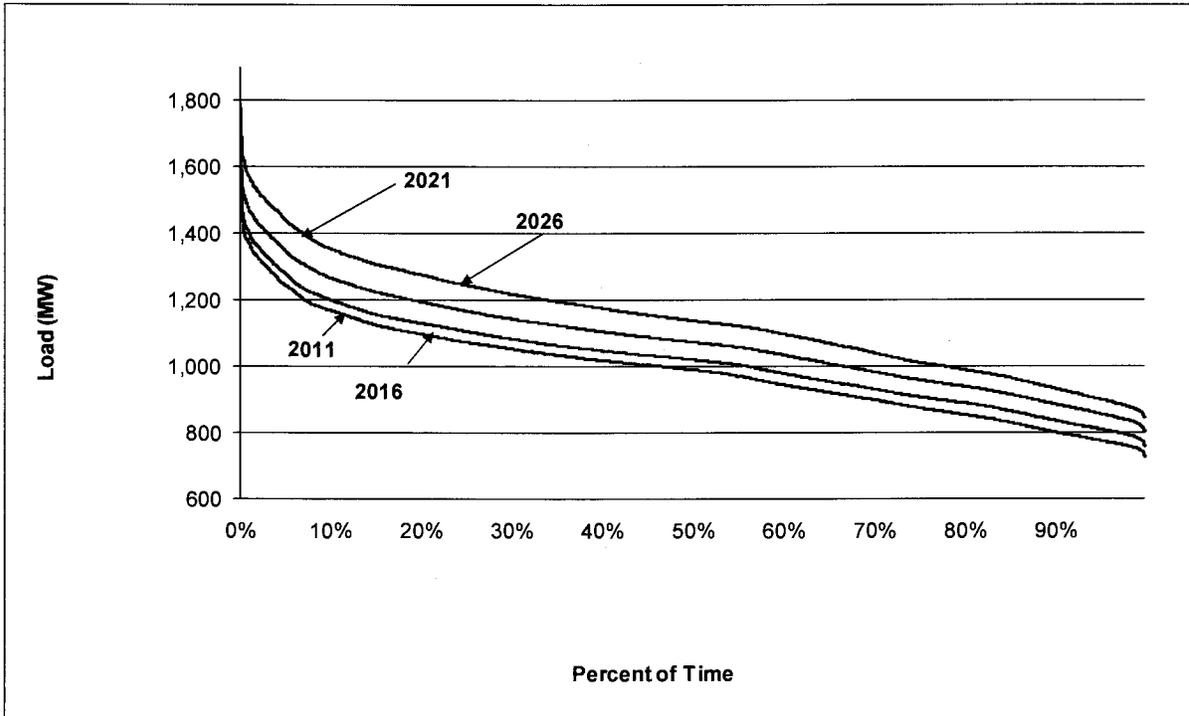
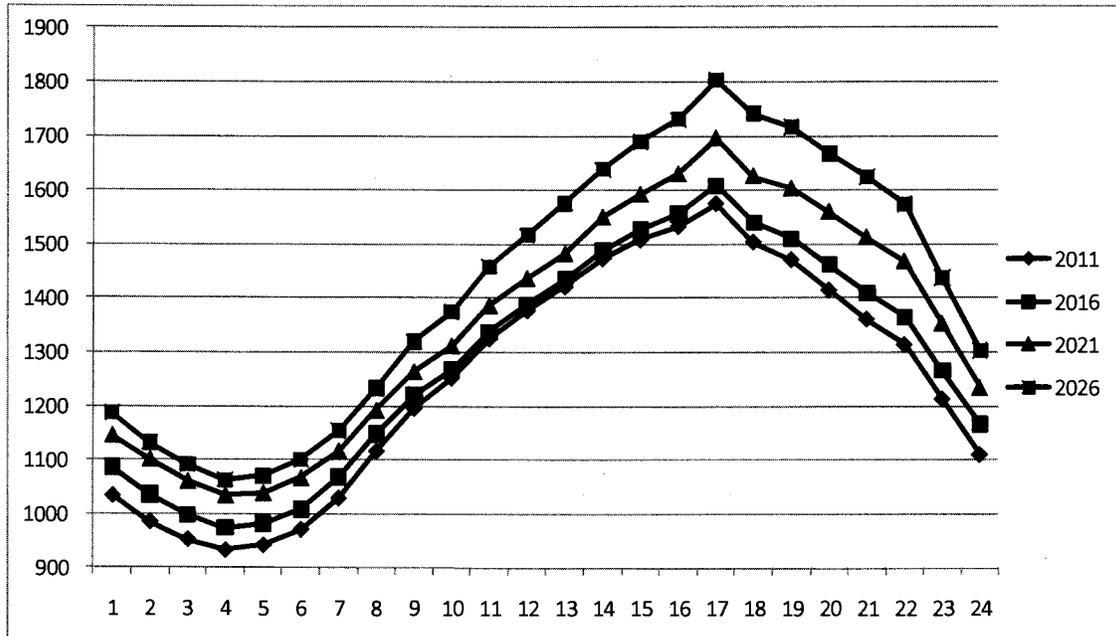


Figure LF 28 shows the peak day hourly loads for the system for 2011, 2016, 2021 and 2026.

**FIGURE LF-28
PEAK DAY HOURLY LOADS
(TOTAL SYSTEM)**



5. FORECAST SCENARIOS: SIERRA SYSTEM

As previously discussed, the Company developed base, high, and low load forecast scenarios. The high and low load forecasts represent low probability events. Figure LF-29 displays a summary of the energy and peak demand for the low, base, and high scenarios.

**FIGURE LF-29
ENERGY AND PEAK DEMAND
(TOTAL SYSTEM)**

Year	Energy					Summer Peak				
	Low	Base	High	Low to Base	High to Base	Low	IRP	High	Low to IRP 8th	High to IRP 8th
2010	8,530	8,671	8,793	-1.6%	1.4%	1,553	1,578	1,600	-1.6%	1.4%
2011	8,362	8,666	8,901	-3.5%	2.7%	1,521	1,575	1,623	-3.4%	3.0%
2012	8,373	8,819	9,266	-5.1%	5.1%	1,516	1,592	1,672	-4.8%	5.0%
2013	8,340	8,830	9,324	-5.5%	5.6%	1,510	1,595	1,689	-5.3%	5.9%
2014	8,370	8,860	9,442	-5.5%	6.6%	1,509	1,596	1,702	-5.5%	6.6%
2015	8,366	8,886	9,531	-5.8%	7.3%	1,506	1,599	1,715	-5.8%	7.3%
2016	8,430	8,973	9,665	-6.1%	7.7%	1,512	1,609	1,732	-6.0%	7.6%
2017	8,429	8,995	9,722	-6.3%	8.1%	1,506	1,609	1,738	-6.4%	8.0%
2018	8,462	9,061	9,824	-6.6%	8.4%	1,525	1,634	1,770	-6.7%	8.3%
2019	8,507	9,149	9,954	-7.0%	8.8%	1,532	1,651	1,791	-7.2%	8.5%
2020	8,606	9,305	10,149	-7.5%	9.1%	1,543	1,670	1,815	-7.6%	8.7%
2021	8,708	9,447	10,320	-7.8%	9.2%	1,559	1,696	1,845	-8.1%	8.8%
2022	8,843	9,626	10,524	-8.1%	9.3%	1,569	1,717	1,875	-8.6%	9.2%
2023	8,968	9,798	10,727	-8.5%	9.5%	1,578	1,737	1,901	-9.2%	9.4%
2024	9,097	9,987	10,958	-8.9%	9.7%	1,610	1,783	1,954	-9.7%	9.6%
2025	9,153	10,097	11,101	-9.3%	9.9%	1,624	1,806	1,981	-10.1%	9.7%
2026	9,028	10,030	11,072	-10.0%	10.4%	1,613	1,804	1,984	-10.6%	10.0%
2027	9,144	10,202	11,282	-10.4%	10.6%	1,636	1,839	2,025	-11.0%	10.1%
2028	9,347	10,460	11,569	-10.6%	10.6%	1,648	1,864	2,057	-11.6%	10.4%
2029	9,475	10,635	11,766	-10.9%	10.6%	1,685	1,916	2,114	-12.1%	10.3%
2030	9,619	10,836	11,998	-11.2%	10.7%	1,708	1,950	2,155	-12.4%	10.5%
2031	9,686	10,966	12,202	-11.7%	11.3%	1,720	1,973	2,192	-12.8%	11.1%
2032	9,782	11,129	12,444	-12.1%	11.8%	1,732	1,997	2,229	-13.3%	11.6%
2033	9,823	11,230	12,620	-12.5%	12.4%	1,744	2,021	2,267	-13.7%	12.2%
2034	9,891	11,365	12,835	-13.0%	12.9%	1,756	2,045	2,306	-14.1%	12.8%
2035	9,961	11,501	13,053	-13.4%	13.5%	1,768	2,070	2,345	-14.6%	13.3%
2036	10,059	11,673	13,312	-13.8%	14.0%	1,780	2,095	2,385	-15.0%	13.8%
2037	10,100	11,779	13,501	-14.3%	14.6%	1,792	2,120	2,426	-15.5%	14.4%
2038	10,171	11,921	13,730	-14.7%	15.2%	1,805	2,145	2,467	-15.9%	15.0%
2039	10,242	12,064	13,963	-15.1%	15.7%	1,818	2,171	2,509	-16.3%	15.6%
2040	10,343	12,243	14,241	-15.5%	16.3%	1,831	2,197	2,552	-16.7%	16.2%

6. COMPARISON OF THE SIERRA SYSTEM: IRP AND 8TH AMENDMENT LOAD FORECASTS

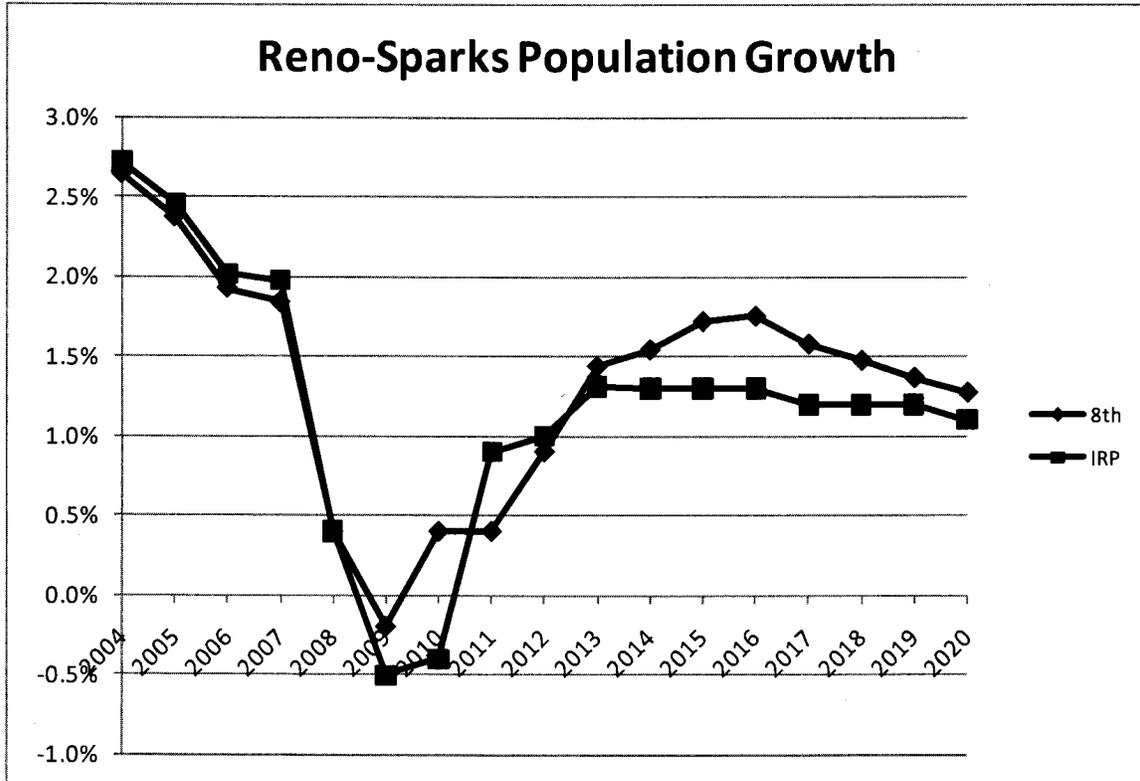
Figure LF-30 compares annual growth rates for the Sierra system of real gross metro product, households, real personal income and population as between the IRP and the 8th Amendment forecasts.

FIGURE LF-30A
COMPARISON OF ECONOMIC DATA UNDERLYING THE NEVADA LOAD FORECAST

	Real GMP		Population		Real Pers. Income		Households	
	8th	IRP	8th	IRP	8th	IRP	8th	IRP
2004	7.2%	7.2%	2.6%	2.7%	8.6%	8.6%	2.3%	2.3%
2005	3.7%	3.7%	2.4%	2.5%	4.0%	4.0%	2.5%	2.5%
2006	3.3%	3.3%	1.9%	2.0%	1.4%	1.4%	2.1%	2.1%
2007	2.1%	2.1%	1.8%	2.0%	4.3%	4.3%	0.9%	0.7%
2008	-2.9%	-2.9%	0.4%	0.4%	-2.4%	-2.4%	0.2%	-1.0%
2009	-5.5%	-5.3%	-0.2%	-0.5%	-6.3%	-5.3%	0.8%	-0.8%
2010	1.2%	1.3%	0.4%	-0.4%	-1.2%	0.4%	1.2%	0.4%
2011	2.6%	2.1%	0.4%	0.9%	0.9%	1.1%	1.5%	1.0%
2012	3.6%	3.4%	0.9%	1.0%	3.0%	2.7%	1.4%	1.1%
2013	2.9%	3.1%	1.4%	1.3%	3.9%	3.7%	1.4%	1.3%
2014	2.7%	2.7%	1.5%	1.3%	3.6%	3.8%	1.5%	1.5%
2015	2.7%	2.5%	1.7%	1.3%	3.1%	3.1%	1.7%	1.7%
2016	2.8%	2.6%	1.8%	1.3%	3.2%	3.1%	1.9%	1.8%
2017	2.8%	2.9%	1.6%	1.2%	3.1%	3.2%	1.9%	1.9%
2018	2.9%	3.0%	1.5%	1.2%	3.2%	3.3%	1.9%	1.8%
2019	3.2%	3.2%	1.4%	1.2%	3.5%	3.6%	2.0%	1.9%
2020	3.2%	3.2%	1.3%	1.1%	3.5%	3.8%	2.1%	2.0%

As discussed above in the jurisdictionalized results, annual growth rates for the Sierra system are more compatible across forecasts due to historical data adjustments to nominal values by governmental entities as more complete data become available. The growth rates for population are generally lower for the IRP forecast than for the 8th Amendment forecast. Other variables are roughly similar as between the two forecasts. Figure LF-31 summarizes graphically the changes in population. As residential customer growth has been flat to declining in 2010, the population forecast for 2010 is lower than 2009. The bump in population in 2011 is based on examination of the State Demographer’s draft forecast from January 2010.

FIGURE LF-31
COMPARISON OF ANNUAL GROWTH RATES OF ECONOMIC VARIABLES
USED IN THE LOAD FORECASTING MODELS



In summary, higher DSM, the new DR pilot program, reductions due to the small solar, wind and hydro programs and lower population growth account for changes in the Sierra IRP forecast as compared to the 8th Amendment forecast. The IRP forecast is higher in the very near term as the variance of actual system energy through April 2010 was 2.7 percent as compared to the 8th Amendment forecast. In the longer term, higher DSM and lower population forecasts reduce the IRP forecast compared to the 8th Amendment forecast. Figure LF-32 summarizes the forecast changes.

**FIGURE 32
SUMMARY
FORECAST OF SYSTEM SALES AND PEAK DEMAND: IRP VS. 8TH
AMENDMENT**

MW		Weather Adjusted Peaks				GWH		Weather Adjusted Sales		
Year	Recorded Peaks	IRP	8th Amend.	Change	% Change	Year	IRP	8th Amend.	Change	% Change
2007	1,743	1,677				2007	8,700			
2008	1,648	1,674				2008	8,585			
2009	1,554	1,566				2009	8,112			
2010		1,578	1,571	7	0.4%	2010	8,157	8,094	64	0.8%
2011		1,575	1,560	15	1.0%	2011	8,153	8,071	83	1.0%
2012		1,592	1,578	14	0.9%	2012	8,274	8,186	87	1.1%
2013		1,595	1,590	5	0.3%	2013	8,306	8,268	38	0.5%
2014		1,596	1,605	-9	-0.6%	2014	8,334	8,376	-41	-0.5%
2015		1,599	1,620	-21	-1.3%	2015	8,359	8,488	-129	-1.5%
2020		1,670	1,722	-52	-3.0%	2020	8,731	9,132	-401	-4.4%
2025		1,806	1,853	-47	-2.5%	2025	9,493	9,807	-314	-3.2%
2030		1,950	2,002	-52	-2.6%	2030	10,184	10,300	-115	-1.1%

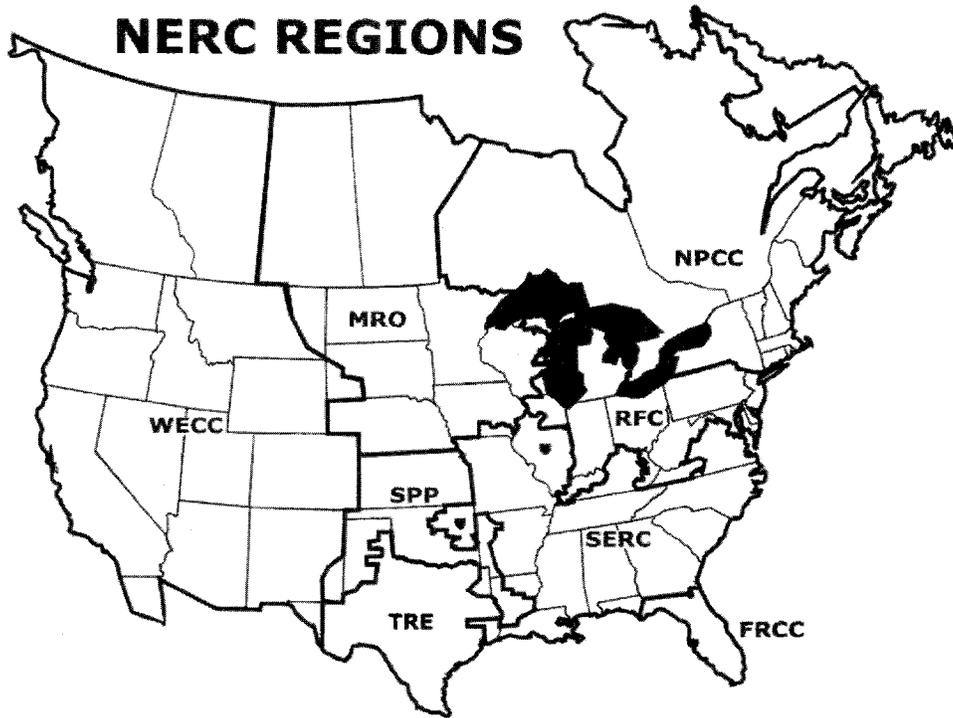
SECTION 2 – MARKET FUNDAMENTALS AND PRICE FORECASTS

A. POWER FUNDAMENTALS

1. WECC CAPACITY AND ENERGY

Regional Profile. Sierra is a member of the Western Electricity Coordinating Council (“WECC”). The WECC is one of eight councils under the North America Electric Reliability Corporation (“NERC”). The purpose of NERC is to set standards for electric reliability and ensure non-discriminatory transmission access to the bulk power electric system. The WECC covers most of the western United States including Nevada, the Canadian provinces of Alberta and British Columbia, and the northern portion of Baja California in Mexico (Figure MF-1).

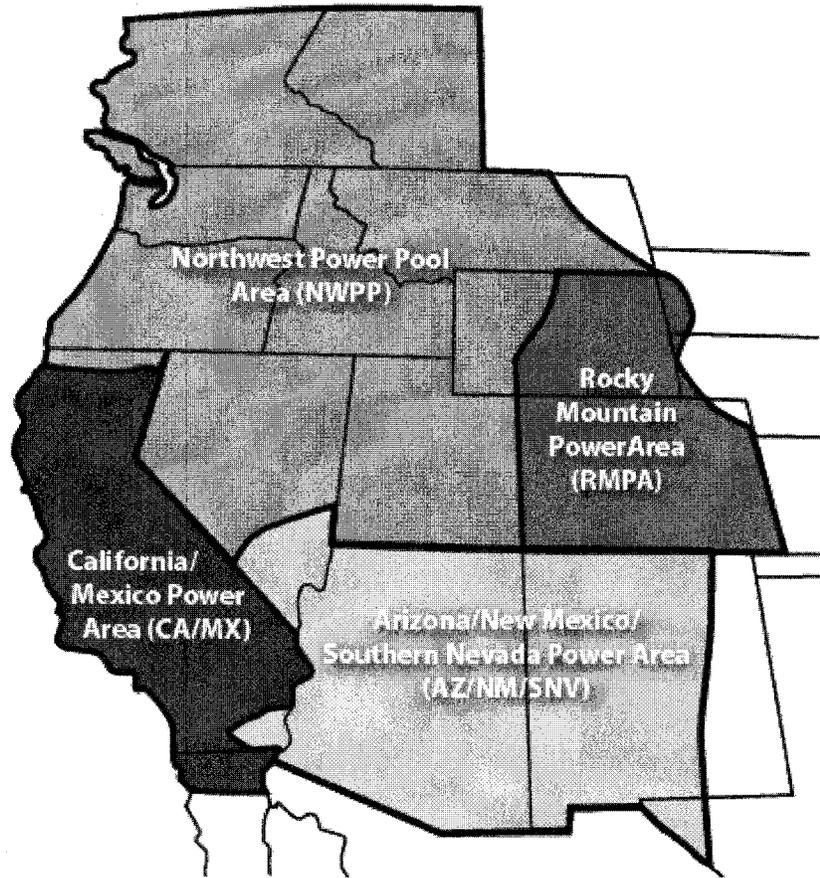
**FIGURE MF-1
WECC REGION**



WECC is divided into four sub-regions as shown in Figure MF-2:

- Arizona-New Mexico-Southern Nevada Area (“AZ-NM-SNV”)
- California-Mexico Power Area (“CAMX”)
- Northwest Power Pool (“NWPP”)
- Rocky Mountain Power Area (“RMPA”)

**FIGURE MF-2
WECC SUB-REGIONS**



The AZ-NM-SNV and the CAMX sub-regions peak in the summer and the majority of their resources are gas-fired. The NWPP is a winter peaking sub-region with a large amount of hydroelectric resources. The RMPA's peak can occur in either the summer or the winter, and it has a large amount of coal generation.

Existing Capacity and Energy. Figure MF-3 shows the capacity diversity in the WECC region and the prevalence of gas-fired and hydroelectric generation. Based on the Winter 2009/2010 NERC Reliability Assessment report, existing and potential capacity totals about 190 GW and 5 GW, respectively. The existing capacity includes about 127 GW of conventional, 2 GW of wind, 59 GW of hydro, and 2 GW of biomass resources.