

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 3 OF 22
SUMMARY**

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**SIERRA PACIFIC POWER COMPANY
INTEGRATED RESOURCE PLAN
2010**

**VOLUME 3
SUMMARY**

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SECTION I – INTRODUCTION: NAC §704.9215(2)(a)

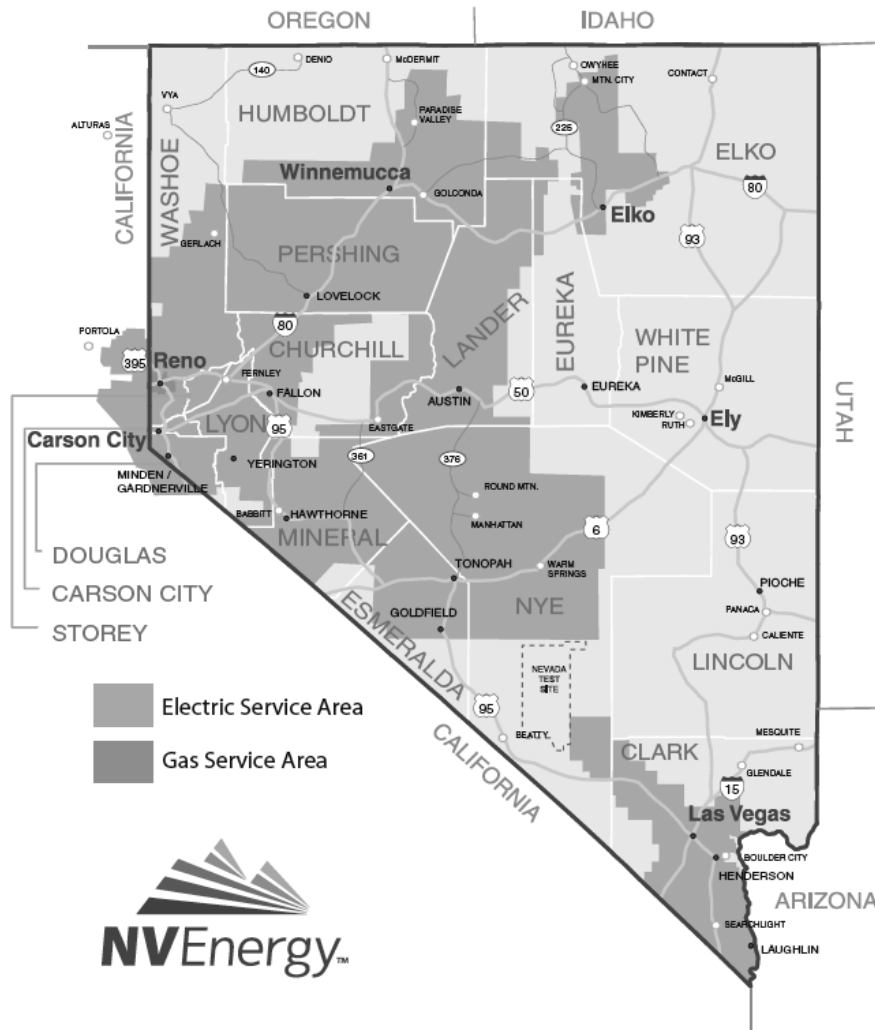
Sierra Pacific Power Company d/b/a NV Energy Described. This resource plan is filed by Sierra Pacific Power Company d/b/a NV Energy (“Sierra” or the “Company”). Sierra is a wholly-owned subsidiary of NV Energy, Inc. (“NV Energy,” formerly Sierra Pacific Resources). NV Energy has two utility subsidiaries: Nevada Power Company d/b/a NV Energy (“Nevada Power”) and Sierra.

As of year-end 2009, Sierra served electric energy to approximately 367,000 retail customers throughout an electric service territory covering over 50,000 square miles of western, central and northeastern Nevada, including the cities of Reno, Sparks, Carson City, and Elko, as well as portions of the Eastern Sierra in California. Additionally, Sierra provides natural gas service to approximately 151,000 customers in an area of about 800 square miles in metropolitan Reno/Sparks area. Sierra serves customer load through a combination of Company-owned generation and purchased power. Purchased power is delivered to Sierra’s customers over high-voltage transmission facilities. Over fifteen percent of Sierra’s portfolio is made up of renewable energy purchases, most of which Sierra’s buys from geothermal resources located in Northern Nevada. Sierra is regulated by the Public Utilities Commission of Nevada (“Commission”), the California Public Utilities Commission (“CPUC”) and the Federal Energy Regulatory Commission (“FERC”). Sierra’s primary place of business is at 6100 Neil Road, in Reno, Nevada.

In December 2009, Sierra requested authority from the Commission to sell its California distribution assets and the Kings Beach Generation Facility (“Kings Beach”) to California Pacific Electric Company (“CalPeco”) in a transaction that also involves (i) the termination of Sierra’s legal obligation to provide retail electric service to its California service territory and the execution of a series of operating and power supply agreements and commitments designed to facilitate the sale and enable Sierra to continue to provide reliable service on a cost-effective basis to its Nevada electric customers (collectively, the “California Transaction”). Sierra is providing information relating to the California Transaction to the Commission as part of this 2010 triennial Integrated Resource Plan (“2010 IRP”) filing to enable the Commission to ascertain whether the California Transaction will produce net benefits or net costs to Nevada ratepayers using resource planning analysis.

A map of Sierra’s current service territory, including its territory in California, along with Nevada Power’s service territory, is set forth in Figure S-1.

**FIGURE S-1
SIERRA AND NEVADA POWER SERVICE TERRITORIES**



Resource Planning Described. Beginning in 1983, the Nevada Legislature gave the Commission oversight authority over Sierra’s long-term planning process. Every three years, Sierra formulates and presents its Preferred Plan for meeting the long-term needs of its customers. Based on projections of customers’ load requirements and the projected mix of available purchased power and generation (taking into account estimated retirements of older existing units and contracts), Sierra prepares a long-term “integrated resource plan” or “IRP,” in which it lays out programs to first reduce energy consumption, through investments in conservation and demand side management (“DSM”). Any remaining identified needs can be met by building or purchasing generation (from conventional and renewable energy sources), and building or purchasing transmission to move generation and purchased power around the system. Pursuant to regulation, Sierra also includes in its triennial IRPs an Energy Supply Plan (“ESP”) that describes how the Company will manage its energy purchases and sales, as well as its coal and natural gas supplies (physical and financial) and transportation over the next three years.

2010 IRP and Action Plan Period. This 2010 IRP filing addresses the twenty-year planning period 2011 to 2030. The Company’s Preferred Plan and Alternative Plan are formulated and compared to different options using economic models. The IRP includes an “Action Plan” that details the steps that Sierra will take over the next three years (2011, 2012, and 2013) to implement the Preferred Plan. The Action Plan includes a description of the costs by year of the investments Sierra is seeking authority to make on behalf of customers in each year of the Action Plan period. A detailed description of each proposed conservation and demand side project, as well as proposals to construct new utility plant and purchase new resources, is provided in detailed narratives that are included in the IRP. The Action Plan also describes Sierra’s proposed ESP, which includes a power procurement plan, fuel procurement plan, and risk management strategy for the Action Plan period 2011-2013.

Strategic Plan. The Action Plan is consistent with Sierra’s strategic plan to provide clean, safe, reliable electricity to its Nevada customers at reasonable and predictable prices by:

1. Increasing energy efficiency and conservation programs (also known as DSM programs);
2. Expanding renewable energy initiatives and investments; and
3. Building transmission and generation assets that will utilize the best available technology to improve the environment while balancing the mix of fuels used to produce electricity.

Need for New Investment in DSM and Transmission Assets and to Decommission Older, Inefficient Remote Generation. Sierra has significantly reduced its reliance on volatile wholesale markets in recent years. In 2009, Sierra purchased 27 percent less energy from neighboring utilities than it did in 2008. The Company generated 62.9 percent of its total energy requirements in 2009 from Company-owned facilities, compared to 50.5 percent in 2008. With the decline in loads caused by the economic downturn, completion of the Tracy Combined Cycle unit (“Tracy”), and acquisition of the output of the Newmont coal plant in 2008 (“Newmont”), Sierra now has sufficient Company-owned and/or controlled generation to meet most of its customers’ near and mid-term needs.

This Action Plan is driven primarily by the need to comply with Nevada’s aggressive Renewable Portfolio Standard (“RPS”), which is codified at NRS 704.7821, as amended by SB 358 from the 2009 Session. The RPS requires the Company “to generate, acquire or save electricity from portfolio energy systems or efficiency measures” in amounts that are prescribed by statute. In SB 358 (2009 Session), the Nevada Legislature increased both the total amount of renewable energy to be included in Sierra’s energy portfolio (expressed as a percentage of Sierra’s retail load) and the portion that must be generated or acquired from solar resources.¹

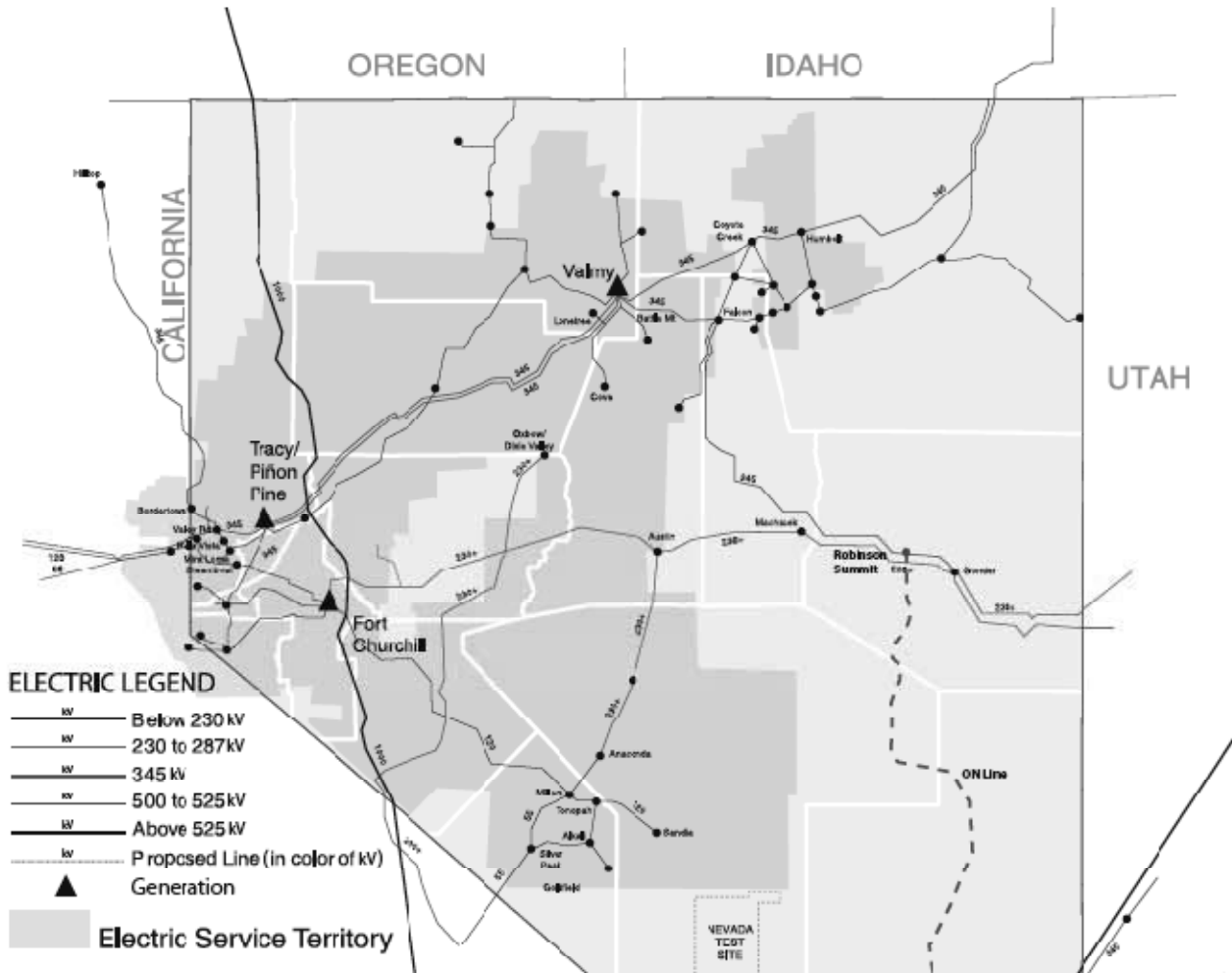
¹ The RPS will increase from 12 percent of retail load in 2009 to 15 percent in 2011, 18 percent in 2013, 20 percent in 2015, 22 percent in 2020, and 25 percent in 2025. In addition, of the total amount of electricity generated, acquired or saved from portfolio energy systems or efficiency measures by Sierra, five percent must be generated or acquired from solar renewable energy systems. This percentage increases to 6 percent for 2016 and each calendar year thereafter.

Even though Sierra's loads are projected to remain relatively flat during the Action Plan period, Sierra must continue to invest in new renewable energy resources in order to keep pace with the growing requirements of the RPS. Notwithstanding the difficult economic environment, Sierra must sustain its efforts to comply with Nevada law by investing more in DSM programs, decommissioning older and inefficient remote generation, and constructing transmission projects needed to facilitate renewable resource development.

The Resource Plan is Consistent with Strategic Plan. Consistent with its strategic plan and the mandates of the RPS, Sierra requests Commission acceptance of DSM programs that will generate portfolio credits ("PCs") under the RPS. These programs and projects are detailed in Sections III and V below. In addition, the Company is requesting approval to decommission several older remotely located diesel and natural gas generators, and construct transmission infrastructure in the Fallon area.

Figure S-2 shows a map of Sierra's service territory and the location of existing generation units and transmission lines, including the proposed One Nevada Transmission Line ("ON Line"), which is the subject of Sierra's pending Eighth Amendment to its 2007 IRP.

**FIGURE S-2
MAP OF TRANSMISSION SYSTEM INCLUDING ON LINE**



Energy Supply Plan. This ESP is the product of a careful analysis of a range of energy supply options and their associated costs and risks. Integral aspects of the analyses include Sierra’s expected capacity and energy positions, market fundamentals and an assessment of the challenges that Sierra will face in balancing the objectives of minimizing cost of service, minimizing rate volatility, maximizing reliability of supply, and optimizing the portfolio for the benefit of retail customers.

Reliability risk during the Action Plan period is small due to recent additions to the Company’s power portfolio. Sierra has no open capacity positions for 2011 or 2012, and small open positions in April and July 2013.

Price volatility risk remains, particularly with respect to fuel supplies. Sierra addresses this risk with a proposal to hedge a total of 50% of forecasted financial gas requirements. The additional hedges that would be procured under Sierra’s proposed strategy would be \$2 out-of-the-money call options.

California Transaction. In December 2009, Sierra requested authority from the Commission to proceed with the California Transaction (Docket No. 09-12002). The Regulatory Operations Staff of the Commission (the “Staff”) has raised concerns about the Commission’s authority to grant certain of the authorizations requested by Sierra in the 09-12002 Application. Therefore, Sierra has elected to provide information concerning the California Transaction in this IRP filing. Inclusion of the California Transaction in this filing also enables Staff and the Commission to better ascertain whether the California Transaction will produce net benefits or net costs to Nevada ratepayers using resource planning analysis.

Sierra analyzed the average system cost over twenty years under the Preferred Plan, with and without the California Transaction. The impact of the California Transaction on nominal average system cost per kWh is minimal--an approximate increase in the annual compound system average cost of 0.02% during the forecast period.

In the IRP Application, Sierra is requesting that the Commission (i) bifurcate the California Transaction portion of the IRP from the remaining portions of the IRP filing; (ii) consolidate the California Transaction portion of the IRP with Docket No. 09-12002; and (iii) expedite its consideration of Sierra’s requests for authorization concerning the California Transaction in the resulting consolidated dockets on a 135-day procedural schedule. In this manner, the action Sierra requests on the California Transaction in this IRP will be consolidated with Sierra’s requests in Docket No. 09-12002. Sierra believes that, by consolidating and addressing California Transaction-specific issues and concerns in one consolidated proceeding (Docket No. 09-12002 as supplemented by the California Transaction portion of the IRP) the California Transaction can be addressed most effectively and efficiently by all interested stakeholders and the Commission.

SECTION II – FORECAST OF GROWTH: NAC §704.9215(2)(b)

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 Commercial and Industrial (“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%.

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

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, 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 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.

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 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 Eighth 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.

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.

Reductions for DSM. Given the economic outlook and the projected impact on sales of Sierra’s 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.

Low, Base and High Scenarios. The Company developed base, high, and low load forecast scenarios. The high and low scenarios were prepared by examining gross domestic product (“GDP”) from national scenarios, prior sales and customer growth and a forecast of plug-in hybrids. Customer growth was then adjusted to provide a sales forecast that represented high and low sales growth based on past sales and customer history. These high and low scenarios represent low probability events.

Required Figures. Figure S-3 shows the forecast of energy sales for each of the twenty years of planning period under the low, base, and high scenarios, both with and without DSM. Figure S-4 shows the forecast of peak demand for each of the twenty years in the planning period, also under the low, base, and high scenarios, also with and without DSM.

**FIGURE S-3
LOW, BASE, AND HIGH SALES SCENARIOS WITH AND WITHOUT DSM**

| Year | SALES (GWH) WITH DSM | | | | SALES (GWH) WITHOUT DSM | | |
|------|--|--------|--------|--|-------------------------|--------|--------|
| | LOW | BASE | HIGH | | LOW | BASE | HIGH |
| 2010 | 8,026 | 8,157 | 8,286 | | 8,134 | 8,248 | 8,347 |
| 2011 | 7,870 | 8,153 | 8,386 | | 8,088 | 8,339 | 8,525 |
| 2012 | 7,857 | 8,274 | 8,689 | | 8,163 | 8,518 | 8,892 |
| 2013 | 7,849 | 8,306 | 8,747 | | 8,202 | 8,582 | 8,997 |
| 2014 | 7,877 | 8,334 | 8,836 | | 8,276 | 8,665 | 9,133 |
| 2015 | 7,874 | 8,359 | 8,899 | | 8,335 | 8,743 | 9,240 |
| 2016 | 7,913 | 8,419 | 9,001 | | 8,437 | 8,856 | 9,386 |
| 2017 | 7,933 | 8,462 | 9,079 | | 8,520 | 8,953 | 9,508 |
| 2018 | 7,963 | 8,523 | 9,174 | | 8,611 | 9,066 | 9,647 |
| 2019 | 8,005 | 8,605 | 9,296 | | 8,710 | 9,197 | 9,809 |
| 2020 | 8,079 | 8,731 | 9,448 | | 8,809 | 9,345 | 9,988 |
| 2021 | 8,193 | 8,884 | 9,619 | | 8,889 | 9,470 | 10,149 |
| 2022 | 8,319 | 9,052 | 9,812 | | 8,978 | 9,608 | 10,317 |
| 2023 | 8,436 | 9,213 | 9,997 | | 9,071 | 9,750 | 10,493 |
| 2024 | 8,533 | 9,364 | 10,183 | | 9,178 | 9,910 | 10,689 |
| 2025 | 8,609 | 9,493 | 10,345 | | 9,264 | 10,048 | 10,860 |
| 2026 | 8,492 | 9,430 | 10,316 | | 9,155 | 9,993 | 10,840 |
| 2027 | 8,600 | 9,591 | 10,512 | | 9,249 | 10,143 | 11,028 |
| 2028 | 8,766 | 9,805 | 10,750 | | 9,354 | 10,307 | 11,228 |
| 2029 | 8,911 | 9,996 | 10,965 | | 9,435 | 10,446 | 11,402 |
| 2030 | 9,045 | 10,184 | 11,182 | | 9,530 | 10,601 | 11,593 |
| | | | | | | | |
| | Includes the effects of DR and small solar, wind and hydro projects. | | | | | | |

**FIGURE S-4
LOW, BASE, AND HIGH PEAK DEMAND SCENARIOS WITH AND WITHOUT DSM**

| Year | PEAK DEMAND (MW) WITH DSM | | | PEAK DEMAND (MW) WITHOUT DSM | | |
|--|---------------------------|-------|-------|------------------------------|-------|-------|
| | LOW | BASE | HIGH | LOW | BASE | HIGH |
| 2010 | 1,553 | 1,578 | 1,600 | 1,571 | 1,591 | 1,612 |
| 2011 | 1,521 | 1,575 | 1,623 | 1,557 | 1,605 | 1,644 |
| 2012 | 1,516 | 1,592 | 1,672 | 1,572 | 1,640 | 1,705 |
| 2013 | 1,510 | 1,595 | 1,689 | 1,582 | 1,657 | 1,731 |
| 2014 | 1,509 | 1,596 | 1,702 | 1,590 | 1,674 | 1,758 |
| 2015 | 1,506 | 1,599 | 1,715 | 1,600 | 1,689 | 1,780 |
| 2016 | 1,512 | 1,609 | 1,732 | 1,627 | 1,707 | 1,805 |
| 2017 | 1,506 | 1,609 | 1,738 | 1,636 | 1,721 | 1,824 |
| 2018 | 1,525 | 1,634 | 1,770 | 1,667 | 1,756 | 1,859 |
| 2019 | 1,532 | 1,651 | 1,791 | 1,687 | 1,782 | 1,889 |
| 2020 | 1,543 | 1,670 | 1,815 | 1,698 | 1,801 | 1,925 |
| 2021 | 1,559 | 1,696 | 1,845 | 1,715 | 1,829 | 1,946 |
| 2022 | 1,569 | 1,717 | 1,875 | 1,729 | 1,853 | 1,988 |
| 2023 | 1,578 | 1,737 | 1,901 | 1,738 | 1,886 | 2,015 |
| 2024 | 1,610 | 1,783 | 1,954 | 1,787 | 1,933 | 2,068 |
| 2025 | 1,624 | 1,806 | 1,981 | 1,792 | 1,948 | 2,096 |
| 2026 | 1,613 | 1,804 | 1,984 | 1,783 | 1,950 | 2,111 |
| 2027 | 1,636 | 1,839 | 2,025 | 1,804 | 1,983 | 2,135 |
| 2028 | 1,648 | 1,864 | 2,057 | 1,811 | 2,016 | 2,174 |
| 2029 | 1,685 | 1,916 | 2,114 | 1,855 | 2,061 | 2,224 |
| 2030 | 1,708 | 1,950 | 2,155 | 1,874 | 2,091 | 2,262 |
| Includes the effects of DR and small solar, wind and hydro projects. | | | | | | |

SECTION III – DEMAND SIDE PLAN SUMMARY: NAC §704.9215(2)(c)

Although this IRP spans the twenty year period from 2011 to 2030, the proposed Demand Side Plan addresses the Action Plan period, January 2011 through December 2013. The proposed Demand Side Plan represents a moderate expansion (by approximately one-third) of program activity relative to the previously approved 2008 – 2010 Demand Side Plan. The incremental investment represented by the proposed Demand Side Plan will bring a net benefit of \$63 million to the communities served by Sierra. Program expansions are driven by a new solar program mandated by SB 437 (Sec 43.5 3) (2009 Legislature), a pilot DR program designed to explore opportunities presented by infrastructure to be installed on customers’ premises as part of the Advanced Service Delivery (“ASD”) project, and an increase to the budget of the Commercial Retrofit Incentive program to answer customer demand for services for that program. Sierra is seeking Commission authorization to proceed with the following programs:

Consumer Electronics and Plug Loads: The new Consumer Electronics and Plug Loads program addresses the load growth caused by the rapid proliferation of consumer electronics and office equipment by providing midstream and upstream incentives for retailers and original equipment manufacturers to increase the stocking, promotion, and sales of the highest efficiency

products on the market. This program has an Action Plan budget of \$1.20 million and a lifetime energy savings target of 25.7 million kWh.

ENERGY STAR® Manufactured Homes: The ENERGY STAR® New Manufactured Homes program will continue to move an increasing share of the new manufactured homes placed in Sierra's service area from what has been basic energy construction under the HUD standards to high performance ENERGY STAR® levels by the strategic application of rebates, educational outreach and marketing support. This program has an Action Plan budget of \$0.61 million and a lifetime energy savings target of 18.9 million kWh.

Residential Solar Thermal Water Heating: The new Residential Solar Thermal Water Heating program provides education, training and incentives to support the development a solar water heating industry in Nevada. This program has an Action Plan budget of \$0.95 million and a lifetime energy savings target of 10.0 million kWh.

Non-Profit Agency Grants: This program provides grants for general energy efficiency upgrades to commercial spaces leased or owned by non-profit organizations. Grants will be awarded based on submitted applications, as well as the potential for energy and demand savings in each grant request. The program also will assist non-profit organizations in completing the grant application. This program has an Action Plan budget of \$0.33 million and a lifetime energy savings target of 3.9 million kWh.

Low Income Weatherization: This program facilitates the installation of energy efficiency measures in single and multi-family homes with incomes between 200 percent of the Federal poverty level and 80 percent of county median income. This program has an Action Plan budget of \$1.80 million and a lifetime energy savings target of 7.9 million kWh.

Demand Response: The goal of the DR program is to evaluate the opportunities that may be available to help temper the Company's summer and/or winter peaks. Sierra has not previously offered or tested DR measures other than irrigation pump load control. The program will contain a Direct Load Control Trial for residential air conditioning and water heating, a Commercial and Industrial Direct Load Control Trial and a Dynamic Pricing Trial with an estimated installed demand response reduction capacity of approximately 5.2 MW in 2011. The program has been designed assuming that the ASD infrastructure will be in place. This program has an Action Plan budget of \$3.7 million.

Residential Energy Efficient Lighting: The Residential Energy Efficient Lighting Program, previously known as the Energy Star® Lighting and Appliances program, provides direct incentives to encourage consumers to purchase energy-efficient lighting products. This program has an Action Plan budget of \$8.0 million and a lifetime energy savings target of 433 million kWh.

Second Refrigerator Collection and Recycling: This program helps customers reduce energy consumption by removing operating second refrigerators from homes and recycling them. This program has an Action Plan budget of \$2.10 million and a lifetime energy savings target of 107 million kWh.

Energy Smart Schools: The objective of the Energy Smart Schools program, formally known as the Sure Bet Schools Program, is designed to produce energy and cost savings for the 13 school districts and public charter schools in Sierra's service territory. The program provides training, technical assistance, and incentives. This program has an Action Plan budget of \$1.2 million and a lifetime energy savings target of 103.4 million kWh.

Commercial Retrofit Incentives: The Commercial Retrofit Incentives program, previously known as Sure Bet Commercial Incentives, facilitates the implementation of energy efficient measures in commercial, industrial and institutional facilities through offering incentives and comprehensive technical services. This program has an Action Plan budget of \$12.0 million and a lifetime energy savings target of 753.8 million kWh.

Commercial New Construction: The Commercial New Construction program, previously known as Sure Bet New Construction, provides financial incentives and technical assistance to building owners and developers to identify, validate, and implement energy efficiency measures. This program has an Action Plan budget of \$3.0 million and a lifetime energy savings target of 146.2 million kWh.

Market and Technology Trials: The program performs an assessment and testing of innovative and energy-efficient technologies with applications in the residential, small-commercial, and industrial markets in Nevada. Over the past several years, this program in conjunction with Nevada Power's similar program has supported investigations of a variety of potentially valuable technologies, a number of which Sierra expects to or has included in its DSM programs. This program has an Action Plan budget of \$0.30 million.

Energy Education and Consultation: This initiative educates customers regarding the efficient use of electricity, with an Action Plan budget of \$1.02 million.

The program scope and supporting data for each program are provided in respective program data sheets found in Exhibit A of the Demand Side Plan to the 2010 Resource Plan. Figure S-5, below, shows the Action Plan budgets for each of the Demand Side Plan programs for which the Company is requesting approval.

**FIGURE S-5
DEMAND SIDE ACTION PLAN BUDGET**

| Budget | 2011 | 2012 | 2013 | Total |
|--|---------------------|---------------------|---------------------|---------------------|
| Part I.A | | | | |
| Energy Education and Consultation | | | | |
| Non-Profit Agency Grants | \$110,000 | \$110,000 | \$110,000 | \$330,000 |
| Energy Education | \$340,000 | \$340,000 | \$340,000 | \$1,020,000 |
| <i>Subtotal -- Part I.A</i> | <i>\$450,000</i> | <i>\$450,000</i> | <i>\$450,000</i> | <i>\$1,350,000</i> |
| Part I.B | | | | |
| Low Income Customers | | | | |
| Low Income Weatherization | \$600,000 | \$600,000 | \$600,000 | \$1,800,000 |
| <i>Subtotal -- Part I.B</i> | <i>\$600,000</i> | <i>\$600,000</i> | <i>\$600,000</i> | <i>\$1,800,000</i> |
| <i>Subtotal -- Part I (A&B)</i> | <i>\$1,050,000</i> | <i>\$1,050,000</i> | <i>\$1,050,000</i> | <i>\$3,150,000</i> |
| Part II. | | | | |
| Misc. Market and Technology Trials | | | | |
| Market and Technology Trials | \$100,000 | \$100,000 | \$100,000 | \$300,000 |
| <i>Subtotal -- Part II -- Market and Technology Trials</i> | <i>\$100,000</i> | <i>\$100,000</i> | <i>\$100,000</i> | <i>\$300,000</i> |
| Part III. | | | | |
| Demand Response | | | | |
| Demand Response | \$1,170,000 | \$1,200,000 | \$1,300,000 | \$3,670,000 |
| <i>Subtotal -- Part III -- DR Programs</i> | <i>\$1,170,000</i> | <i>\$1,200,000</i> | <i>\$1,300,000</i> | <i>\$3,670,000</i> |
| Part IV. | | | | |
| All Other Programs | | | | |
| Residential Lighting | \$2,900,000 | \$2,700,000 | \$2,400,000 | \$8,000,000 |
| Second Refrigerator Collection and Recycling | \$700,000 | \$700,000 | \$700,000 | \$2,100,000 |
| ES Manufactured Homes | \$110,000 | \$200,000 | \$300,000 | \$610,000 |
| Commercial New Construction | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$3,000,000 |
| Energy Efficient Schools | \$400,000 | \$400,000 | \$400,000 | \$1,200,000 |
| Commercial Retrofit Incentives | \$4,000,000 | \$4,000,000 | \$4,000,000 | \$12,000,000 |
| Consumer Electronics & Plug Loads | \$400,000 | \$400,000 | \$400,000 | \$1,200,000 |
| Solar Thermal Water Heating | \$250,000 | \$350,000 | \$350,000 | \$950,000 |
| <i>Subtotal -- Part IV -- All Other Programs</i> | <i>\$9,760,000</i> | <i>\$9,750,000</i> | <i>\$9,550,000</i> | <i>\$29,060,000</i> |
| Total Demand Side Programs | \$12,080,000 | \$12,100,000 | \$12,000,000 | \$36,180,000 |

**FIGURE S-6
20-YEAR FORECAST OF DEMAND REDUCTION**

| Total Incremental DSM by Program | | | | | | | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|--|
| Program | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | |
| Non-Profit Grants | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | |
| Low Income Weatherization | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Demand Response | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Residential Lighting | 4.2 | 2.5 | 0.5 | 0.3 | 0.4 | 0.3 | 0.2 | 0.4 | 0.3 | 0.1 | -0.3 | -0.1 | -0.2 | 0.1 | 0.1 | -0.3 | 0.0 | -0.1 | 0.0 | -0.2 | -0.2 | |
| Refrigerator Recycling | 1.2 | 2.6 | 4.6 | 2.5 | 3.0 | 2.0 | 1.8 | 2.7 | 2.4 | 0.4 | -2.3 | -0.7 | -1.2 | 0.8 | 0.7 | -2.4 | 0.4 | -0.6 | -0.3 | -1.7 | -1.6 | |
| ES Manufactured Homes | 0.1 | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.0 | -0.2 | -0.1 | -0.1 | 0.1 | 0.1 | -0.2 | 0.0 | 0.0 | 0.0 | -0.1 | -0.1 | |
| Commercial New Construction | 0.9 | 0.9 | 1.3 | 1.3 | 1.4 | 1.1 | 1.0 | 1.4 | 1.5 | 1.1 | -0.1 | 0.7 | 0.6 | 1.5 | 0.7 | -1.4 | 0.2 | 0.0 | 1.0 | 0.2 | -0.2 | |
| Energy Smart Schools | 1.0 | 1.0 | 1.3 | 1.4 | 1.5 | 1.1 | 1.0 | 1.4 | 1.6 | 1.2 | -0.1 | 0.7 | 0.6 | 1.6 | 0.7 | -1.4 | 0.2 | 0.0 | 1.0 | 0.2 | -0.2 | |
| Commercial Retrofit | 4.5 | 4.0 | 5.4 | 5.5 | 6.1 | 4.5 | 4.2 | 5.8 | 6.4 | 4.9 | -0.6 | 2.8 | 2.5 | 6.4 | 2.9 | -5.9 | 0.8 | 0.0 | 4.2 | 0.7 | -1.0 | |
| Consumer Electr and Plug Loads | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Solar Thermal Water Heating | 0.0 | 0.7 | 1.3 | 0.7 | 0.8 | 0.6 | 0.5 | 0.8 | 0.7 | 0.1 | -0.6 | -0.2 | -0.3 | 0.2 | 0.2 | -0.7 | 0.1 | -0.2 | -0.1 | -0.5 | -0.5 | |
| Demand Response | | | | | | | | | | | | | | | | | | | | | | |
| Prior to 2010 Demand Response | 0.0 | 5.2 | 2.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total MW with Losses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | 11.9 | 17.2 | 16.8 | 14.0 | 13.8 | 9.8 | 9.1 | 12.9 | 13.3 | 7.9 | -4.4 | 3.1 | 1.9 | 10.8 | 5.4 | -12.4 | 1.8 | -0.9 | 5.8 | -1.5 | -4.0 | |
| Footnote1: The Advanced Service Delivery Dynamic Pricing Trial demand reductions are included in Demand Response | | | | | | | | | | | | | | | | | | | | | | |
| Footnote2: The DSM total MW (excluding Demand Response) are from the load forecast hourly estimate at the peak hour. | | | | | | | | | | | | | | | | | | | | | | |
| Note: Does not include Small Solar so the total will not exactly match the L&R table. | | | | | | | | | | | | | | | | | | | | | | |

SECTION IV - SUMMARY OF THE PREFERRED PLAN: NAC §704.9215(2)(d)

Once the load forecast and demand-side plan are analyzed, the Company can determine its long-term need for additional resources. In this case, the results of the load forecast and Demand Side Plan indicate that Sierra will not need to add significant blocks of new energy and capacity until it begins to retire its coal-fired steam units and older gas-fired combustion turbines. Figures S-8 through S-11 show Sierra’s projected loads and resources under the Preferred Plan, assuming base case conditions. Notes to the loads and resources tables are shown on Figure S-12. As is demonstrated in these tables, Sierra does not need to add significant generation resources until 2022, when the first Valmy coal unit is scheduled to retire.

FIGURE S-8 – L&R TABLE – 2011 – 2025

| SIERRA PACIFIC POWER COMPANY | | | | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2011 - 2025 with March 2010 Base Load Forecast Case 4S | | | | | | | | | | | | | | | |
| Description | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| GROSS SYSTEM PEAK LOAD FORECAST | 1,605 | 1,640 | 1,657 | 1,674 | 1,689 | 1,640 | 1,655 | 1,691 | 1,716 | 1,734 | 1,761 | 1,785 | 1,818 | 1,865 | 1,878 |
| DSM & Solar | 25 | 41 | 53 | 69 | 81 | 89 | 103 | 113 | 122 | 122 | 124 | 127 | 140 | 141 | 133 |
| Demand Response | 5 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| SYSTEM PEAK LOAD FORECAST (March2010 Forecast) | 1,575 | 1,592 | 1,595 | 1,596 | 1,599 | 1,542 | 1,543 | 1,569 | 1,585 | 1,603 | 1,628 | 1,649 | 1,669 | 1,715 | 1,736 |
| Planning Reserve Requirement (MW) | 236 | 239 | 239 | 239 | 240 | 231 | 231 | 235 | 238 | 240 | 244 | 247 | 250 | 257 | 260 |
| Planning Reserve Requirement (%) | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% |
| REQUIRED RESOURCES | 1,811 | 1,831 | 1,834 | 1,835 | 1,839 | 1,773 | 1,774 | 1,804 | 1,823 | 1,843 | 1,872 | 1,896 | 1,919 | 1,972 | 1,996 |
| RESOURCES (Itemized) | | | | | | | | | | | | | | | |
| Existing Internal Generation Facilities (Retire Date: 12/31/xx) | | | | | | | | | | | | | | | |
| Clark Mtn. G.T. 1, 2 (2010) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Clark Mountain C.T. 3, 4 (2024) | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | - |
| Diesels | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 18 | 12 | 12 | 12 | 12 | 12 |
| Ft. Churchill 1 (2018) | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | - | - | - | - | - | - | - |
| Ft. Churchill 2 (2021) | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | - | - | - | - |
| Tracy 1 (2013) | 53 | 53 | 53 | - | - | - | - | - | - | - | - | - | - | - | - |
| Tracy 2 (2015) | 83 | 83 | 83 | 83 | 83 | - | - | - | - | - | - | - | - | - | - |
| Tracy 3 (2024) | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | - |
| Tracy 4, 5 (Piton Pine) (2031) | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 |
| Valmy 1 (2021) | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | - | - | - | - |
| Valmy 2 (2025) | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 |
| Winnemucca G.T. (2010) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Tracy 541MW 2x2x1 CC (2043) | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 |
| Newmont Coal Plant | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 |
| Total Existing Generation | 1,734 | 1,734 | 1,734 | 1,681 | 1,681 | 1,598 | 1,598 | 1,598 | 1,485 | 1,480 | 1,474 | 1,234 | 1,031 | 1,031 | 791 |
| Planned Internal Generation Facilities | | | | | | | | | | | | | | | |
| 7-7EA 2022 (Firm Resource for Renewable Replace) | - | - | - | - | - | - | - | - | - | - | - | 504 | 504 | 504 | 504 |
| CC25 (2025) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 572 |
| CT35 (2035) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Planned Generation Facilities Requiring Import Rights | - | - | - | - | - | - | - | - | - | - | - | 504 | 504 | 504 | 1,076 |
| Total Planned Generation | - | - | - | - | - | - | - | - | - | - | - | 504 | 504 | 504 | 1,076 |
| TOTAL GENERATION | 1,734 | 1,734 | 1,734 | 1,681 | 1,681 | 1,598 | 1,598 | 1,598 | 1,485 | 1,480 | 1,474 | 1,738 | 1,535 | 1,535 | 1,867 |

FIGURE S-9 – L&R TABLE –2011 – 2025

| | | SIERRA PACIFIC POWER COMPANY | | | | | | | | | | | | | | |
|---|---|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | 2011 - 2025 with March 2010 Base Load Forecast Case 4S | | | | | | | | | | | | | | |
| | | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| Description | | | | | | | | | | | | | | | | |
| Existing and Planned Purchases: (Internal) | | | | | | | | | | | | | | | | |
| 1 | Beowawe | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 2 | Brady | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 3 | BuVaSP | 15 | 15 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4 | Burdett | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 46 | CarlLakSP | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 47 | DsrTPKSP | 9 | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 48 | Empire (San Emidio) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 49 | FiknerSP | 36 | 36 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 50 | GalZSP | 9 | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 51 | Gal3 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 52 | HOMES1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 53 | HOOPER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | NNW Wind 150 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 55 | WMRE Lockwood | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 56 | RWIND_22 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 57 | SrWeSP | 7 | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 58 | SodaLake | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 59 | Solar1SP | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 60 | Steam1A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 61 | Steam2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 62 | Steam3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 63 | SteamHL | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 64 | StWtrSP | 21 | 21 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 65 | TCID | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 66 | TMWAFish | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 67 | TMWAverd | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 68 | TMWAwash | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 69 | Total Existing and Planned Purchases | 169 | 187 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 129 | 129 | 129 |
| 70 | TOTAL GROSS PURCHASES | 1,903 | 1,921 | 1,806 | 1,753 | 1,753 | 1,670 | 1,670 | 1,670 | 1,557 | 1,552 | 1,546 | 1,867 | 1,664 | 1,664 | 1,996 |
| 71 | AVAILABLE RESOURCES | - | - | 28 | 82 | 86 | 103 | 104 | 134 | 266 | 291 | 326 | 29 | 255 | 308 | 0 |
| 72 | OPEN POSITION | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 73 | LONG POSITION | 92 | 90 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 74 | TRANSMISSION | | | | | | | | | | | | | | | |
| 75 | NETWORK COMMITMENTS: | | | | | | | | | | | | | | | |
| 76 | Barriek (1) | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 77 | TDPUD (forecast from TDPUD) (2) | 36 | 37 | 38 | 39 | 40 | 41 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 48 |
| 78 | City of Fallon (2) | 18 | 19 | 20 | 21 | 21 | 22 | 23 | 23 | 24 | 25 | 26 | 26 | 27 | 27 | 28 |
| 79 | Total Network Commitment | 154 | 156 | 157 | 158 | 160 | 161 | 163 | 164 | 166 | 167 | 169 | 170 | 172 | 174 | 175 |
| 80 | PRE-ORDER 888 TRANSMISSION COMMITMENTS: | | | | | | | | | | | | | | | |
| 81 | Mt. Wheeler Total (PacifiCorp Intertie & IPP Intertie) (3) | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| 82 | BPA for Wells and Harney (4) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 83 | Total Pre-Order 888 Transmission Commitments | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 |
| 84 | Total Network & 888 Transmission Commitments | 335 | 337 | 338 | 339 | 341 | 342 | 344 | 345 | 347 | 348 | 350 | 351 | 353 | 355 | 356 |
| 85 | TRANSMISSION | | | | | | | | | | | | | | | |
| 86 | System Import Transmission Capacity (5) | 1,000 | 1,000 | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 |
| 87 | Import Capacity Requirement for Native Load | - | - | 28 | 82 | 86 | 103 | 104 | 134 | 266 | 291 | 326 | 29 | 255 | 308 | 0 |
| 88 | Import for Renewable Wind Resources | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| 89 | Total Import Requirement for Native Load | 150 | 150 | 178 | 232 | 236 | 253 | 254 | 284 | 416 | 441 | 476 | 179 | 405 | 458 | 350 |
| 90 | Total Network & Transmission Commitments | 335 | 337 | 338 | 339 | 341 | 342 | 344 | 345 | 347 | 348 | 350 | 351 | 353 | 355 | 356 |
| 91 | Import Capacity for Mt. Wheeler/Mt. Hope Firm TSA | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| 92 | Import capacity for Plumas Sierra | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 93 | Transmission For Reserve Sharing Group Imports (6) | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| 94 | Estimated Available Transmission Capacity Based on All Native Load Generating Units Operating (7) | 223 | 221 | 492 | 436 | 432 | 413 | 410 | 379 | 246 | 219 | 182 | 478 | 250 | 195 | 301 |

FIGURE S-10 –L&R TABLE –2026 – 2040

| Forecast: March2010 | | SIERRA PACIFIC POWER COMPANY | | | | | | | | | | | | | |
|---|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 2026 - 2040 with March 2010 Base Load Forecast Case 4S | | | | | | | | | | | | | |
| Description | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| GROSS SYSTEM PEAK LOAD FORECAST | 1,879 | 1,912 | 1,946 | 1,991 | 2,020 | 2,042 | 2,065 | 2,088 | 2,111 | 2,135 | 2,159 | 2,183 | 2,207 | 2,232 | 2,257 |
| DSM & Solar | 137 | 135 | 143 | 136 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 132 |
| Demand Response | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| SYSTEM PEAK LOAD FORECAST (March2010 Forecast) | 1,733 | 1,768 | 1,794 | 1,846 | 1,879 | 1,901 | 1,924 | 1,947 | 1,970 | 1,994 | 2,018 | 2,042 | 2,066 | 2,091 | 2,116 |
| Planning Reserve Requirement (MW) | 260 | 265 | 269 | 277 | 282 | 285 | 289 | 292 | 296 | 299 | 303 | 306 | 310 | 314 | 317 |
| Planning Reserve Requirement (%) | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% |
| REQUIRED RESOURCES | 1,993 | 2,033 | 2,063 | 2,123 | 2,161 | 2,186 | 2,213 | 2,239 | 2,266 | 2,293 | 2,321 | 2,348 | 2,376 | 2,405 | 2,433 |
| RESOURCES (Itemized) | | | | | | | | | | | | | | | |
| <u>Existing Internal Generation Facilities. (Retire Date..12/31/xx)</u> | | | | | | | | | | | | | | | |
| Clark Mtn. G.T. 1, 2 (2010) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Clark Mountain C.T. 3, 4 (2024) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Desels | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Ft. Churchill 1 (2018) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ft. Churchill 2 (2021) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Tracy 1 (2013) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Tracy 2 (2015) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Tracy 3 (2024) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Tracy 4, 5 (Pison Pine) (2031) | 104 | 104 | 104 | 104 | 104 | 104 | - | - | - | - | - | - | - | - | - |
| Valmy 1 (2021) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Valmy 2 (2025) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Winnemucca G.T. (2010) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Tracy 541MW 2x2x1 CC (2043) | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 |
| Newmont Coal Plant | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Existing Generation | 657 | 657 | 657 | 657 | 657 | 657 | 553 | 553 | 553 | 553 | 553 | 553 | 553 | 553 | 553 |
| <u>Planned Internal Generation Facilities</u> | | | | | | | | | | | | | | | |
| 7-7EA 2022 (Firm Resource for Renewable Replace) | 504 | 504 | 504 | 504 | 504 | 504 | 504 | 504 | 504 | 504 | 504 | 504 | 504 | 504 | 504 |
| CC25 (2025) | 572 | 572 | 572 | 572 | 572 | 572 | 572 | 572 | 572 | 572 | 572 | 572 | 572 | 572 | 572 |
| CT35 (2035) | - | - | - | - | - | - | - | - | - | 249 | 249 | 249 | 249 | 249 | 249 |
| | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,325 | 1,325 | 1,325 | 1,325 | 1,325 | 1,325 |
| <u>Planned Generation Facilities Requiring Import Rights</u> | | | | | | | | | | | | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Planned Generation | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,076 | 1,325 | 1,325 | 1,325 | 1,325 | 1,325 | 1,325 |
| TOTAL GENERATION | 1,733 | 1,733 | 1,733 | 1,733 | 1,733 | 1,733 | 1,629 | 1,629 | 1,629 | 1,629 | 1,878 | 1,878 | 1,878 | 1,878 | 1,878 |

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FIGURE S-11 –L&R TABLE –2026 – 2040

| | | SIERRA PACIFIC POWER COMPANY | | | | | | | | | | | | | | |
|-----|---|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 2026 - 2040 with March 2010 Base Load Forecast Case 4S | | | | | | | | | | | | | | |
| | | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 1 | Description | | | | | | | | | | | | | | | |
| 2 | Existing and Planned Purchases: (Internal) | | | | | | | | | | | | | | | |
| 3 | Beowawe | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 4 | Brady | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 46 | BurlVa/ISP | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 47 | Burdett | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 48 | CarlLakSP | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 49 | DstrPKSP | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 50 | Empire (San Emidio) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 51 | FikeneSP | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 52 | Gal2SP | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 53 | Gal3 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 54 | HOMES1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 55 | HOOPER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | NW Wind 150 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 57 | WIRE Lockwood | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| 58 | RWIND_22 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 59 | SilWa/ISP | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 60 | SodaLake | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 61 | Solar1SP | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 62 | Steam1A | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 63 | Steam2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 64 | Steam3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 65 | SteamHL | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 66 | StWtr1SP | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 67 | TCID | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 68 | TMWafish | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 69 | TMWAverd | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 70 | TMWAwash | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 71 | Total Existing and Planned Purchases | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| 72 | TOTAL GROSS PURCHASES | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| 73 | AVAILABLE RESOURCES | 1,862 | 1,862 | 1,862 | 1,862 | 1,862 | 1,758 | 1,758 | 1,758 | 2,007 | 2,007 | 2,007 | 2,007 | 2,007 | 2,007 | 2,007 |
| 74 | OPEN POSITION | 131 | 171 | 201 | 261 | 299 | 324 | 454 | 481 | 507 | 286 | 314 | 341 | 369 | 397 | 426 |
| 75 | LONG POSITION | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 76 | TRANSMISSION | | | | | | | | | | | | | | | |
| 77 | Barrick (1) | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 78 | TDPUD (forecast from TDPUD) (2) | 48 | 49 | 50 | 51 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| 79 | City of Fallon (2) | 29 | 30 | 30 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| 80 | Total Network Commitment | 177 | 179 | 181 | 183 | 184 | 184 | 184 | 184 | 184 | 184 | 184 | 184 | 184 | 184 | 184 |
| 81 | NETWORK COMMITMENTS: | | | | | | | | | | | | | | | |
| 82 | Mt. Wheeler Total (PacifiCorp Intertie & IPP Intertie) (3) | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| 83 | BPA for Wells and Harney (4) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 84 | Total Pre-Order 888 Transmission Commitments | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 |
| 85 | Total Network & 888 Transmission Commitments | 358 | 360 | 362 | 364 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| 86 | PRE-ORDER 888 TRANSMISSION COMMITMENTS: | | | | | | | | | | | | | | | |
| 87 | System Import Transmission Capacity (5) | 1,300 | 1,300 | 1,301 | 1,302 | 1,303 | 1,304 | 1,305 | 1,306 | 1,307 | 1,308 | 1,309 | 1,310 | 1,311 | 1,312 | 1,312 |
| 88 | Import Capacity Requirement for Native Load | 131 | 171 | 201 | 261 | 299 | 324 | 454 | 481 | 507 | 286 | 314 | 341 | 369 | 397 | 426 |
| 89 | Import for Renewable Wind Resources | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 |
| 90 | Total Import Requirement for Native Load | 481 | 521 | 551 | 611 | 649 | 674 | 804 | 831 | 857 | 636 | 664 | 691 | 719 | 747 | 776 |
| 91 | Total Network & Transmission Commitments | 358 | 360 | 362 | 364 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| 92 | Import Capacity for Mt Wheeler/Mt Hope Firm TSA | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| 93 | Import capacity for Plumas Sierra | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 94 | Transmission For Reserve Sharing Group Imports (6) | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| 95 | Estimated Available Transmission Capacity Based on All Native Load Generating Units Operating (7) | 169 | 127 | 96 | 35 | (3) | (27) | (157) | (182) | (208) | 15 | (12) | (38) | (65) | (93) | (121) |
| 96 | TRANSMISSION | | | | | | | | | | | | | | | |
| 97 | System Import Transmission Capacity (5) | 1,300 | 1,300 | 1,301 | 1,302 | 1,303 | 1,304 | 1,305 | 1,306 | 1,307 | 1,308 | 1,309 | 1,310 | 1,311 | 1,312 | 1,312 |
| 98 | Import Capacity Requirement for Native Load | 131 | 171 | 201 | 261 | 299 | 324 | 454 | 481 | 507 | 286 | 314 | 341 | 369 | 397 | 426 |
| 99 | Import for Renewable Wind Resources | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 |
| 100 | Total Import Requirement for Native Load | 481 | 521 | 551 | 611 | 649 | 674 | 804 | 831 | 857 | 636 | 664 | 691 | 719 | 747 | 776 |
| 101 | Total Network & Transmission Commitments | 358 | 360 | 362 | 364 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| 102 | Import Capacity for Mt Wheeler/Mt Hope Firm TSA | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| 103 | Import capacity for Plumas Sierra | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 104 | Transmission For Reserve Sharing Group Imports (6) | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| 105 | Estimated Available Transmission Capacity Based on All Native Load Generating Units Operating (7) | 169 | 127 | 96 | 35 | (3) | (27) | (157) | (182) | (208) | 15 | (12) | (38) | (65) | (93) | (121) |

FIGURE S-12
FOOTNOTES TO SIERRA’S L&R TABLES

1. Barrick as a Network Customer has import capacity based on Designated Network Resources.
2. Truckee Donner Public Utility District (TDPUD) and the City of Fallon as a Network Customers have rights to import their full load and losses. These values are based on their forecasted loads.
3. Mt Wheeler includes 31 MW for the City and 40 MW for Quadra Mine.
4. BPA (Harney, Wells - Maggie Creek & Carlin) service not to exceed 110 MW combined per General Transfer Agreement.
5. Maximum import capacity based on optimal operating conditions.
6. The values shown are for the reserve sharing assistance from the Northwest Power Pool and are based on current load projections, projected firm import usage and projected generation resources.
7. Estimates are based on summer peak conditions only. ATC will vary by month.

This 2010 IRP attempts to solve for this identified need by evaluating the present worth of revenue requirements (“PWRR”) of alternative expansion plans over dozens of sensitivities in order to determine which alternative has the lowest PWRR over 20 and 30-year planning horizons. By regulation, the Company’s IRP decisions must take into account an assessment of risk with respect to cost, reliability, finances, and exposure to fuel and power price volatility. The goal of the analysis is to determine the expansion plan that will provide the greatest savings to Sierra’s customers while also meeting the RPS and environmental requirements and considering other relevant factors such as fuel diversity, operational flexibility, and related economic and planning considerations.

The Company constructed six expansion plans for meeting its projected needs for incremental capacity and energy in 2022. Two plans (Cases 1 and 3) center on conventional gas-fired technologies: a gas-fired combined-cycle unit (572 MW); and a block of simple-cycle combustion turbines (581 MW). Three plans based on renewable energy resources (paired with gas-fired combustion turbines for summer peak capacity) were developed: geothermal (345 MW) (Case 5), solar thermal (484 MW) (Case 6) and wind turbine (574 MW) generation (Case 4). The sixth expansion plan (Case 2) relies exclusively on market purchases to meet incremental capacity and energy requirements. None of the six expansion plans relies on coal-fired generation (neither the construction of the Ely Energy Center nor expansion of the Valmy facility) due to uncertainties with respect to future greenhouse gas (“GHG”) regulations.

The inputs to the economic model include Sierra’s load forecast, fuel and purchased power (“F&PP”) price forecast, a renewable energy expansion plan calculated to allow the Company to meet the RPS, forecasted project cost and construction schedules, and the characteristics of the resources being analyzed. The output of the model expresses the production cost and capital revenue requirements of each alternative. A comparison of the PWRR of the various alternatives shows which alternative results in the lowest cost resource for Sierra’s customers. Key assumptions include the following:

- Separate capital expense recovery runs (“CERs”) were prepared for the expansion plans including the replacement of a 572 MW CC plant in 2022 with equivalent capacity of market purchases, CTs, wind, geothermal, and solar thermal generation. All renewable generation has CT peaking unit backup capacity.

- In every case, Sierra’s compliance with the RPS was accomplished with incremental renewable resources located in both southern and northern Nevada.
- The evaluation was performed with and without external system sales. Sierra does not propose to justify any plan on the basis of external system sales. However, periods of surplus capacity can be expected outside the peak summer months. Sierra optimizes its resources by making sales of capacity that is not needed to serve native load, where appropriate. Revenues from these sales are credited to customers through the deferred energy process, thereby resulting in a reduction in energy costs for Sierra’s customers.
- In addition to the base case scenario, high and low F&PP price scenarios and high and low load forecast scenarios also were evaluated for all expansion plans.
- All cases also were run with and without the effects of a potential GHG cap-and-trade program included in the dispatch cost.

PWRRs were calculated for each of the six expansion plans, around the base, high and low F&PP scenarios, base, high and low load scenarios, with and without GHG costs, and both with and without external system sales. As expected, selection of the expansion plan with the lowest PWRR varied depending on the scenario being evaluated. The Preferred Plan (574 MW of Wind Generation with Peaking backup) and the Alternative Plan (581 MW of CT generation) ranked first and second respectively with the lowest PWRR under the base load, base fuel and mid GHG sensitivities.

The Preferred Plan and Alternative Plan are among the lowest cost alternatives over the greatest range of potential scenarios including potential GHG effects. They also provide increased operating flexibility, improve system reliability and allow Sierra to comply with the RPS more economically.

SECTION V – SUMMARY OF THE RENEWABLE ENERGY PLAN: NAC §704.9215(2)(e)

The Company’s requirements under the RPS for the Action Plan period are shown in Figure S-13.

**FIGURE S-13
RPS REQUIREMENT FOR THE ACTION PLAN PERIOD**

| Portfolio Energy Credit (kPC) Requirement For 2011 - 2040 | | | | | | |
|---|-------|-----------|---------|-----------|------------------------|------------------|
| Year | RPS % | Total | Solar | All Other | % vs. Prior Year | Cum. vs. 2011 |
| Action Plan (2011 - 2013) | | | | | | |
| 2011 | 15% | 1,139,787 | 56,989 | 1,082,797 | | |
| 2012 | 15% | 1,158,194 | 57,910 | 1,100,284 | 101.6% | 101.6% |
| 2013 | 18% | 1,395,918 | 69,796 | 1,326,122 | 120.5% | 122.5% |
| 2014 | 18% | 1,400,936 | 70,047 | 1,330,890 | 100.4% | 122.9% |
| 2015 | 20% | 1,561,295 | 78,065 | 1,483,230 | 111.4% | 137.0% |
| 2016 | 20% | 1,573,011 | 94,381 | 1,478,631 | 100.8% | 138.0% |
| 2017 | 20% | 1,581,456 | 94,887 | 1,486,568 | 100.5% | 138.8% |
| 2018 | 20% | 1,593,603 | 95,616 | 1,497,987 | 100.8% | 139.8% |
| 2019 | 20% | 1,609,886 | 96,593 | 1,513,293 | 101.0% | 141.2% |
| 2020 | 22% | 1,798,010 | 107,881 | 1,690,130 | 111.7% | 157.7% |
| 2021 | 22% | 1,830,848 | 109,851 | 1,720,997 | 101.8% | 160.6% |
| 2022 | 22% | 1,866,812 | 112,009 | 1,754,803 | 102.0% | 163.8% |
| 2023 | 22% | 1,901,467 | 114,088 | 1,787,379 | 101.9% | 166.8% |
| 2024 | 22% | 1,933,700 | 116,022 | 1,817,678 | 101.7% | 169.7% |
| 2025 | 25% | 2,228,762 | 133,726 | 2,095,036 | 115.3% | 195.5% |
| 2026 | 25% | 2,212,557 | 132,753 | 2,079,803 | 99.3% | 194.1% |
| 2027 | 25% | 2,251,979 | 135,119 | 2,116,860 | 101.8% | 197.6% |
| 2028 | 25% | 2,304,371 | 138,262 | 2,166,109 | 102.3% | 202.2% |
| 2029 | 25% | 2,350,978 | 141,059 | 2,209,920 | 102.0% | 206.3% |
| 2030 | 25% | 2,396,858 | 143,811 | 2,253,046 | 102.0% | 210.3% |
| 2031 | 25% | 2,414,065 | 144,844 | 2,269,221 | 100.7% | 211.8% |
| 2032 | 25% | 2,450,204 | 147,012 | 2,303,192 | 101.5% | 215.0% |
| 2033 | 25% | 2,472,965 | 148,378 | 2,324,587 | 100.9% | 217.0% |
| 2034 | 25% | 2,502,958 | 150,177 | 2,352,780 | 101.2% | 219.6% |
| 2035 | 25% | 2,533,312 | 151,999 | 2,381,313 | 101.2% | 222.3% |
| 2036 | 25% | 2,571,251 | 154,275 | 2,416,976 | 101.5% | 225.6% |
| 2037 | 25% | 2,595,199 | 155,712 | 2,439,487 | 100.9% | 227.7% |
| 2038 | 25% | 2,626,747 | 157,605 | 2,469,142 | 101.2% | 230.5% |
| 2039 | 25% | 2,658,670 | 159,520 | 2,499,149 | 101.2% | 233.3% |
| 2040 | 25% | 2,698,489 | 161,909 | 2,536,579 | 101.5% | 236.8% |

A list of all of Sierra's renewable PPAs is set forth below in Figure S-14, including renewable PPAs that provide Sierra with both load and PCs, and Related PPAs, pursuant to which Sierra purchases energy, but not PCs, from renewable generation.

NAC §704.9215 states that the utility should include in its Summary information regarding the anticipated costs of each renewable contract. Because disclosure of pricing information to any third party would adversely affect Sierra's ability to obtain energy and PCs on behalf of customers under favorable terms and at competitive prices, and because publication of the prices paid would place Sierra's customers in a distinctly disadvantageous position and compromise the acquisition, bidding and negotiation process with respect to future energy and PC purchases, Sierra has included the pricing for individual contracts in Confidential Technical Appendix Item CON-1. Confidential information can be reviewed by parties to this IRP proceeding pursuant to the Commission's regulations. *See* NAC 703.527 *et.seq.*

**FIGURE S-14
EXISTING RENEWABLE ENERGY CONTRACTS**

SIERRA PACIFIC POWER COMPANY d/b/a NV ENERGY

| RENEWABLE ENERGY PPAs (MUST TAKE) (INCLUDES QFs) | | | | | | | |
|--|---|--|-------------|--------|---------------------|-------------------|--|
| Counterparty | Project | Location | Fuel Type | MW | Contract Start Date | Contract End Date | |
| Acciona-Solargenix, LLC | Nevada Solar One ¹ | Boulder City, NV | Solar | 22.1 | 3/6/2007 | 12/31/2027 | |
| Beowawe Power, LLC | Beowawe Power | Beowawe, NV | Geo | 17.7 | 1/1/2006 | 12/31/2017 | |
| Homestretch Geothermal, LLC | Homestretch Combined | Yerington, NV | Geo | 2.1 | 5/18/1987 | 6/1/2017 | |
| Hooper Hydro | Frank Hooper | Elko, NV | Hydro | 0.8 | 6/23/1986 | 6/22/2016 | |
| Idaho Power Company | Multiple Renewable Resources (IPC) ⁴ | Multiple Locations | Renewable | 31.0 | 4/1/2010 | 3/31/2012 | |
| Magma Energy Corp | Amor IX-Soda Lake I & II | Fallon, NV | Geo | 23.1 | 8/4/1991 | 8/1/2021 | |
| Ormat Nevada | Brady Geothermal Project | Churchill County, NV | Geo | 24.0 | 7/30/1992 | 7/30/2022 | |
| Ormat Nevada | Steamboat 1A | Washoe County, NV | Geo | 2.0 | 12/13/1988 | 12/13/2018 | |
| Ormat Nevada | Steamboat Hills | Washoe County, NV | Geo | 13.2 | 2/23/1988 | 2/23/2018 | |
| Ormat Nevada | Steamboat II | Washoe County, NV | Geo | 13.4 | 12/13/1992 | 12/13/2022 | |
| Ormat Nevada | Steamboat III | Washoe County, NV | Geo | 13.4 | 12/19/1992 | 12/19/2022 | |
| Ormat Nevada-ORNI 7, LLC | Richard Burdette | Washoe County, NV | Geo | 26.0 | 2/28/2006 | 12/31/2026 | |
| Ormat Nevada-ORNI 14, LLC | Galena 3 | Washoe County, NV | Geo | 26.5 | 2/21/2008 | 12/31/2028 | |
| Sierra Pacific Industries | Sierra Pacific Industries | Loyalton, CA | Biomass | 10.0 | 11/8/1989 | 11/7/2019 | |
| Truckee Carson Irrigation District | New Lahontan | Fallon, NV | Hydro | 4.0 | 6/15/1989 | 6/15/2039 | |
| Truckee Meadows Water Authority | Fleish | Sierra County, CA/Washoe County, NV | Hydro | 2.3 | 5/16/2008 | 6/1/2028 | |
| Truckee Meadows Water Authority | Verdi | Washoe County, NV | Hydro | 2.2 | 5/15/2009 | 6/1/2029 | |
| Truckee Meadows Water Authority | Washoe | Washoe County, NV | Hydro | 2.2 | 7/25/2008 | 8/1/2028 | |
| US Geothermal | San Emidio | Empire, NV | Geo | 3.8 | 6/30/1988 | 12/1/2017 | |
| | | | TOTAL | 239.6 | | | |
| RENEWABLE ENERGY RELATED PPAs & PCAs (MUST TAKE) | | | | | | | |
| Counterparty | Project | Location | Fuel Type | MW | Contract Start Date | Contract End Date | |
| Sierra Pacific / [SPPC sells to NPC] | Nevada Solar One ¹ | Boulder City, NV | Solar | (22.1) | 3/6/2007 | 12/31/2027 | |
| Sierra Pacific / [SPPC buys from NPC] | Carson Lake Basin Project ^{2,3} | Fallon, NV | Geo | 62.0 | Q2 2011 | 20 yrs. | |
| Sierra Pacific / [SPPC buys from NPC] | Salt Wells ² | Churchill County, NV | Geo | 23.6 | 9/18/2009 | 12/31/2029 | |
| Sierra Pacific / [SPPC buys from NPC] | Stillwater (New) ² | Churchill County, NV | Geo | 47.2 | 10/10/2009 | 12/31/2029 | |
| Sierra Pacific / [SPPC buys from NPC] | Faulkner I Blue Mountain ² | Humboldt County, NV | Geo | 49.5 | 11/20/2009 | 12/31/2029 | |
| Sierra Pacific / [SPPC buys from NPC] | Desert Peak 2 ² | Churchill County, NV | Geo | 19.0 | 4/17/2007 | 12/31/2027 | |
| Sierra Pacific / [SPPC buys from NPC] | Galena 2 ² | Washoe County, NV | Geo | 13.0 | 5/2/2007 | 12/31/2027 | |
| Sierra Pacific / [SPPC buys from NPC] | Jersey Valley ^{2,3} | Lander & Pershing Counties, NV | Geo | 31.5 | Q2 2010 | 20 yrs. | |
| Sierra Pacific / [SPPC buys from NPC] | Carson Lake ^{2,3} | Churchill County, NV | Geo | 31.5 | Q4 2010 | 20 yrs. | |
| Sierra Pacific / [SPPC buys from NPC] | Lockwood Renewable Energy Facility ^{2,3} | Washoe County, NV | Geo | 3.2 | Q4 2011 | 20 yrs. | |
| Sierra Pacific / [SPPC buys from NPC] | Spring Mountain Wind Project ^{2,3} | White Pine, NV | Wind | 150.0 | Q4 2011 | 20 yrs. | |
| | | | TOTAL | 408.4 | | | |
| FIRM SALE | | | | | | | |
| Counterparty | Description | Delivery Point | Fuel Type | MW | Contract Start Date | Contract End Date | |
| Idaho Power Company | Multiple Renewable Resources (IPC) ⁴ | Multiple Locations | System Sale | (31.0) | 4/1/2010 | 3/31/2012 | |
| | | | TOTAL | (31.0) | | | |
| | | | | 617.1 | | | |
| GRAND TOTAL MW (PURCHASED POWER AGREEMENTS LESS RELATED PPA SALES) | | | | | | | |
| RENEWABLE PC ONLY AGREEMENTS (INCLUDING STATION USAGE) | | | | | | | |
| Counterparty | Project | Location | Fuel Type | MW | Contract Start Date | Contract End Date | |
| City of Sparks (TMWRF) | Truckee Meadows Water Treatment - PC | Carson City, NV | Methane | 0.7 | 9/9/2005 | 12/31/2024 | |
| Brady - ORNI 1 and ORNI 2 | Brady - SU | Brady Hotsprings, Churchill County, NV | Geo | 6.2 | 1/1/2004 | 12/31/2013 | |
| Steamboat Geo (SB1, SB1A, SB2 and SB3) | Steamboat Geo - SU | Steamboat Springs, Washoe County, NV | Geo | 10.3 | 1/1/2004 | 12/31/2013 | |
| Steamboat Hills | Steamboat Hills - SU | Steamboat Springs, Washoe County, NV | Geo | 1.0 | 1/1/2004 | 12/31/2013 | |
| Nevada Power Company | Idaho Power Company - PC ⁴ | Multiple Locations | Renewable | (31.0) | 4/1/2010 | 3/31/2012 | |
| Sierra Pacific / [NPC buys from SPPC] | Ormat - SB3, DP 2, and Galena 3 ⁵ | Northern Nevada Service Territory | Geo | (7.0) | 1/1/2009 | 12/31/2028 | |
| | | | TOTAL | (19.9) | | | |
| NOTES: | | | | | | | |
| 1) Both NPC and SPPC have Purchased Power Agreements with Nevada Solar One. Since Nevada Solar One is electrically interconnected to Nevada Power's system, Sierra resells their share of the energy to NPC under a Related PPA. | | | | | | | |
| 2) Since these facilities are (or will be) electrically interconnected to Sierra's system, Nevada Power resells the energy to SPPC under Related PPAs. | | | | | | | |
| 3) These facilities are under development. | | | | | | | |
| 4) Deliveries ranges from 5-45 MW. (up to 550,000 for two year period) | | | | | | | |
| 5.) The delivered PC amount will decline over time. | | | | | | | |

Based on the base load forecast, Sierra forecasts an overall surplus of PCs, and hence RPS compliance, through the year 2024. However, beginning in year 2013, Sierra forecasts a slight deficit of solar credits. This deficit can be met either through offers to purchase qualifying PCs

or contracting with a developer proposing a solar project in the north through the RFP process. However it is anticipated that Sierra's most cost-effective option for its slight projected solar shortfall is to draw from the surplus of solar credits expected to be available at Nevada Power. Beyond 2024, Sierra can expect to meet the RPS in one of three ways:

- (1) Through formal consolidation of RPS requirements with Nevada Power;
- (2) By withdrawing credits from pooling arrangements with Nevada Power; or
- (3) By purchasing additional new long-term renewable resources.

If Sierra proceeds with the third option, the most likely resources to meet future RPS requirements will be geothermal or wind. Generic representations of each of these technology types are included in the PROMOD runs accompanying this filing.

SECTION VI - SUMMARY OF ENERGY SUPPLY PLAN: NAC 704.9215(f)

Background. Pursuant to NAC §704.9061, an "Energy Supply Plan" means a plan that:

1. Establishes the parameters of an energy supply portfolio for a utility for the 3-year period covered by its Action Plan and which balances the objectives of:
 - a) Minimizing the cost of supply;
 - b) Minimizing retail price volatility; and
 - c) Maximizing the reliability of energy supply over the term of the energy supply plan; and
2. Is composed of a purchased power procurement plan, fuel procurement plan and risk management strategy.

Pursuant to NAC 704.9494, the Commission can make a predetermination that the ESP is prudent if the following requirements are met:

- The ESP balances the objectives of minimizing the cost of supply, minimizing retail price volatility and maximizing the reliability of supply over the term of the plan.
- The ESP optimizes the value of the overall supply portfolio of the utility for the benefit of its bundled retail customers.
- The ESP does not contain any feature or mechanism that the Commission finds would impair the restoration of the creditworthiness of the utility or would lead to a deterioration of the creditworthiness of the utility.

The ESP provides the Company's recommended power procurement plan, fuel procurement plan, and risk management strategy based on current conditions. The ESP may need to be adjusted over the Action Plan period to adequately respond to changes in the market, changes in

the Company’s expected loads and resources, and other significant changes in circumstances. Pursuant to NAC §704.9504, Sierra may deviate from an approved ESP “to the extent necessary to respond adequately to any significant change in circumstances not contemplated by the Energy Supply Plan.” If Sierra deviates from a Commission-approved ESP, it will inform Staff of the deviation as soon as practical. In addition, Sierra will include in its next deferred energy application filed pursuant to NAC §§704.023 to 704.195, inclusive, a description of and justification for the deviation. If the deviation from the ESP is of a continuing nature, Sierra will seek authority from the Commission to deviate prospectively from the ESP in an update of the ESP filed pursuant to NAC §704.9506, or in an amendment to the ESP filed pursuant to NAC §704.9504(3).

Cost, Price Volatility, and Reliability Risks. The ESP is the product of a careful analysis of a range of energy supply options and including their associated risks. Integral aspects of the analyses include Sierra’s expected capacity and energy positions, market fundamentals and an assessment of the challenges that Sierra will face in meeting the energy needs of its customers.

Reliability risk during the Action Plan period is small due to recent additions to the Company’s power and gas transportation portfolios. In 2008, Sierra added the 541 MW Tracy and the 203 MW Newmont capacity. These generating capacity additions have resulted in Sierra having no remaining open capacity positions for 2011 and 2012, with only a small open position in 2013.

Price volatility risk remains, particularly with respect to fuel supplies. Assuming approval of the proposed ESP, the estimated costs of fuel and purchased power costs during the Action Plan period under the low, base, and high F&PP price scenarios are summarized in Figure S-15 below:

**FIGURE S-15
ESTIMATED COST OF FUEL AND PURCHASED POWER DURING THE ACTION
PLAN PERIOD (IN \$ MILLIONS)**

| | WEXISTING GAS HEDGES | | | WEXISTING AND ADDITIONAL HEDGES TO MEET HEDGING STRATEGY | | |
|-------------|--|---|---|--|---|---|
| | Cost to Serve Assuming Low F&PP Prices | Cost to Serve Assuming Base F&PP Prices | Cost to Serve Assuming High F&PP Prices | Cost to Serve Assuming Low F&PP Prices | Cost to Serve Assuming Base F&PP Prices | Cost to Serve Assuming High F&PP Prices |
| | (000s) | (000s) | (000s) | (000s) | (000s) | (000s) |
| | (A) | (B) | (C) | (D) | (E) | (F) |
| 2011 | \$307,384 | \$396,392 | \$515,351 | \$309,230 | \$398,238 | \$500,874 |
| 2012 | \$308,231 | \$422,631 | \$573,412 | \$309,121 | \$423,521 | \$565,799 |
| 2013 | \$328,895 | \$429,093 | \$567,044 | \$328,895 | \$429,093 | \$567,044 |

Power Procurement Plan. Based on the ESP load forecast, Sierra’s power position for 2011 and 2012 is completely closed. A small open position of 28 MW is projected for the summer of 2013. In April 2013, an open position of 121 MW is projected due to scheduled generating unit maintenance. The open positions will be filled with quarterly requests for proposals (“RFPs”).

The Company will thus continue its existing practice of monitoring the portfolio quarterly, monthly, weekly, daily, and hourly. In addition, Sierra will continue its existing practice of offering to make short term and forward sales of resources not expected to be needed to serve native load. If Sierra identifies a future need for additional firm capacity and/or energy, Sierra will procure any needed products through a competitive bidding process. Any proposed purchases of greater than three-years in duration would be submitted to the Commission for approval pursuant to NAC §§704.9113 and 704.9512.

Physical Gas Procurement Plan. The Company plans to continue to use the four-season laddering strategy that was approved in Docket No. 09-09001 (Stipulation, Docket No. 09-09001, ¶ 17). The seasonal RFPs are expected to be issued in February and June each year. Transactions will be subject to the availability of conforming bids and the willingness of suppliers to accept reasonable commercial terms. During the ongoing transition to the four-season laddering strategy, monthly projected physical gas requirements not procured through the laddering strategy will be procured on a season-ahead basis. Physical gas volumes will be procured at indexed prices, subject to a cap on the premium which can be exceeded with prior approval from the Company's Energy Risk Committee ("ERC"). If Sierra exceeds the cap, the Company will provide written notice to Staff and the Bureau of Consumer Protection ("BCP"). The amount of gas supply to be acquired will be matched to the Company's gas transportation assets. This means that the Company will continue to solicit physical gas supplies sourced from geographically diverse gas supply basins.

Gas Transportation Plan. Sierra plans to continue to extend existing gas transportation contracts with TransCanada Pipeline Ltd. ("TransCanada"), Paiute Pipeline Co. ("Paiute"), and Northwest Pipeline ("NWPL") on an annual basis pursuant to its evergreen rights. Annual extensions will allow Sierra to avoid making long-term commitments pending further development of potential new pipeline projects (such as the Ruby Gas Transmission project). If NWPL exercises its right to terminate Sierra's existing contract for storage capacity at Jackson Prairie, Sierra will exercise its right of first refusal in order to retain the capacity if, after evaluating the competitive bid that would have to be matched, it is economic to do so. Alternatively, Sierra may negotiate a contract extension with NWPL.

Gas Hedging Plan. For delivery periods April 2011 to March 2012, the Company proposes to hedge 50% of its projected financial gas requirements with \$2 out of the money call options. Acquisition of the additional hedges will begin upon approval by the Commission of the proposed hedging strategy and will be completed no less than 60 days prior to the settlement month. The Company is continuing to evaluate potential gas hedging strategies for the period beyond March 2012. Should the Company determine that additional hedges would be in the best interests of its ratepayers, it will make a specific proposal to the Commission in a future ESP update or in an ESP amendment filed pursuant to NAC 704.9504(3).

Coal Procurement Plan. Sierra plans to use its current practice of issuing annual RFPs to competitively solicit coal supplies. The Company will solicit bids for coals sourced in the Uinta Basin and Southern Wyoming region as well as the Powder River Basin ("PRB"). The successful qualification of PRB coals during 2009 for use in the Valmy units represents a fundamental change in the coal supply situation and planning environment. Thus, while a laddering strategy remains sound, Sierra is recommending a shorter procurement period with

lower percentages committed in each year. In addition, the Company has negotiated a new rail transportation service agreement with Union Pacific Railway to begin in July 2010. This contract will include Central Utah, Western Colorado (North Fork area), Southern Wyoming and PRB origins.

Risk Management Strategy. The ESP mitigates risk in a number of respects, including:

- Careful analysis and evaluation of procurement options,
- Pursuit of alternatives that reduce price volatility for customers,
- Reduced reliance on volatile wholesale energy markets,
- Use of competitive procurement processes,
- Implementation of a gas hedging strategy, and
- Use of a comprehensive set of risk controls, including monitoring and reporting to management of specific transaction limits, credit limits, portfolio limits.

In addition to the key responsibilities of the Enterprise Risk Oversight Committee (“EROC”) and ERC regarding policy direction and monitoring of risk management and control efforts, the following divisions within the Company play a critical role in setting and managing risk strategy as applied to the IRP and ESP:

Energy Supply develops and implements (1) the IRP covering the long-term resource and infrastructure needs and the plans to meet those needs; and (2) the ESP covering, in detail, the intermediate-term resource requirements and the plans to fulfill those requirements. Energy Supply executes transactions that are consistent with the approved IRP and ESP. Material transactions are not executed that deviate from the approved plans without review by the ERC and the prior approval of the EROC.

Risk Control measures the Company’s energy portfolio against specific criteria, including transaction approval limits, test period mark-to-base, value at risk, and credit risk limits. Specific measurements are compared to the approved exposure notification thresholds. Reports are prepared to identify, track and report compliance with the Company’s risk policies.

Credit Risk Management mitigates risk of the organization by reviewing potential transactions with counterparties to make sure they comply with credit limits. All potential transactions are reviewed to determine the credit ratings, policy limits based on credit ratings, the current mark-to-market exposure of all current transactions, and whether the potential credit exposure calculations are within the company policy limits.

SECTION VII – A SUMMARY OF THE ACTIVITIES, ACQUISITIONS, AND COSTS INCLUDED IN THE ACTION PLAN OF THE UTILITY: NAC 704.9215(2)(g)

Generation-Related Items. As is indicated by the loads and resources tables, Sierra has not identified a need to add incremental generating resources during the Action Plan period. Sierra is seeking authority to retire and decommission several older remote generation sites. Based on the cost of meeting new environmental regulations and the high cost of operations and maintenance, it is recommended that the balance of the remote generation facilities, specifically the Battle Mountain, Valley Road, Winnemucca and Clark Mountain 1 and 2, be retired. Table S-16 summarizes retirement information for the remote generation sites.

**FIGURE S-16
REMOTE GENERATION SITE RETIREMENT DATE ADJUSTMENTS**

| Site | Installation Date | Name Plate Capacity | Current Retirement Date | Proposed Retirement Date |
|--------------------|-------------------|---------------------|-------------------------|--------------------------|
| Battle Mountain | 1960 | 8 | 2010 | 2011 |
| Brunswick | 1960 | 6 | 2010 | 2020 |
| Gabbs | 1969 | 6 | 2019 | 2019 |
| Kings Beach | 2008 | 12 | 2038 | 2038 |
| Clark Mountain 1&2 | 1961/1963 | 24 | 2011/2013 | 2011 |
| Valley Road | 1960 | 6 | 2010 | 2011 |
| Winnemucca | 1970 | 15 | 2020 | 2011 |

Sierra has not included the costs of decommissioning these units in its Action Plan budget, but is requesting authorization to accumulate the costs of decommissioning and remediating the sites for the Battle Mountain, Valley Road and Clark Mountain diesels, as well as the Winnemucca CT in separate regulatory asset subaccounts. The following costs would be booked to the regulatory asset accounts:

- 1) The net book value of the generators and related electric investments on the date of retirement;
- 2) A monthly credit reflecting depreciation expense (if any) included in the revenue requirement for general rates;
- 3) All decommissioning and remediation costs;
- 4) Credits for all salvage proceeds; and
- 5) Carrying charges equal to the currently approved Allowance for Funds Used During Construction or “AFUDC” rate on the monthly balance in the regulatory asset subaccount.

This proposed accounting is identical to that used to account for and recover the costs of retiring the Portola and old Kings Beach diesel units. In Sierra's next general rate case proceeding, Sierra will apply to collect the balance in the regulatory asset accounts over an appropriate amortization period.

Transmission-Related Items. The transmission plan is built upon the high load forecast prepared for this filing, generation system characteristics, and existing and future transmission facilities and obligations as described below. Based in part on these key system characteristics, Sierra is not seeking approval of new transmission projects IRP filing. The Company is requesting approval of a Renewable Conceptual Transmission Plan as meeting the requirements of AB 387 (2009 Legislature), as well as modification of budgets and schedules for several previously approved projects:

- Fallon 230 kV Project – Request **budget increase** from \$28,000,000 to \$35,000,000
- Bordertown to Cal Sub – Request **delay** from 2012 to 2014
- WestConnect action plan funding of \$182,000
- Blackhawk Project – Request **delay** from 2013 to 2018
- Blackhawk to Mira Loma 345 kV Line – Request **cancellation**.
- Blackhawk 345 kV Capacitor – Request **delay** from 2013 to 2018
- Plumas-Sierra Interconnection – Request **cancellation**

The **Fallon 230 kV Reinforcement Project** includes the construction of 230 kV lines and switching stations to connect the 230 kV system to the Fallon 60 kV system, and to connect several renewable energy projects in the Fallon area to the system. This project received initial approval in Docket No. 07-06049 for completion in 2013. Expenditures for the Action Plan Period 2008 to 2010 were capped at \$3 million. The components of the project and their respective updated costs are set forth in S-17.

**FIGURE S-17
FALLON 230 KV SYSTEM REINFORCEMENT ESTIMATED COSTS
(MILLIONS, EXCLUDING AFUDC)**

| Fallon 230 kV Reinforcement | Total Project Millions | Pre 2011 | 2011 | 2012 | 2013 | Post 2013 | 3-Year Total |
|---|-------------------------------|-----------------|---------------|----------------|----------------|------------------|---------------------|
| Communications | \$3.38 | \$0.00 | \$0.07 | \$2.37 | \$0.89 | \$0.05 | \$3.33 |
| Permitting | \$3.40 | \$1.25 | \$1.21 | \$0.50 | \$0.40 | \$0.04 | \$2.11 |
| Transmission Lines (230 kV Fold, 230 kV line, 60 kV fold) | \$12.95 | \$0.00 | \$0.25 | \$5.18 | \$6.87 | \$0.65 | \$12.30 |
| Carson Lake Substation | \$5.70 | \$0.00 | \$0.57 | \$4.85 | \$0.28 | \$0.00 | \$5.70 |
| Greenwave Substation | \$6.90 | \$0.00 | \$0.00 | \$0.69 | \$5.87 | \$0.35 | \$6.56 |
| Pony Express Substation | \$1.62 | \$0.00 | \$0.16 | \$1.38 | \$0.08 | \$0.00 | \$1.62 |
| Fallon 60 kV Substation Upgrades | \$0.13 | \$0.00 | \$0.00 | \$0.01 | \$0.10 | \$0.01 | \$0.11 |
| Lahontan Substation Upgrades | \$0.25 | \$0.00 | \$0.00 | \$0.03 | \$0.21 | \$0.01 | \$0.24 |
| Generation Interconnections (Bunejug) | \$1.00 | \$0.00 | \$0.05 | \$0.85 | \$0.10 | \$0.00 | \$1.00 |
| TOTAL | \$35.33 | \$1.25 | \$2.32 | \$15.85 | \$14.80 | \$1.11 | \$32.97 |

Note: Pre 2011 dollars are for Preliminary Design Engineering and Permitting in 2009-2010

The **Bordertown 345/120 kV Transformer and 120 kV Line to California Substation** was originally approved by the Commission in 2007 in Docket No. 07-06049. To date Sierra has not obtained permits for construction of this line. Permitting work is continuing and the current projected in-service date is 2014. Even with the delay in permitting, the project budget has actually declined from \$22 million for the line between Bordertown and Cal Sub to \$20.24 million for line between Bordertown to Cal Sub. Because all costs associated with this project have been previously approved, and because costs have not increased, they are not reflected in this Action Plan budget.

Figure S-18 lists the individual projects and the associated budgets for the Action Plan period.

FIGURE S-18
ACTION PLAN BUDGET
 SIERRA CASH FLOW for 2010 IRP

(Millions of \$, excluding AFUDC)

| Row No. | Action Plan Projects | Pre-2011 Total | 2011 | 2012 | 2013 | 3-Year Total | Post-2013 Total | Project Totals |
|---------|--|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | Transmission | | | | | | | |
| 4 | <i>New Projects</i> | | | | | | | |
| 5 | 230kV Fallon Line & Renewable Interconnections | \$1.25 | \$2.32 | \$15.85 | \$14.80 | \$32.96 | \$1.11 | \$35.33 |
| 6 | WestConnect | | \$0.06 | \$0.06 | \$0.07 | \$0.18 | | \$0.18 |
| 7 | | | | | | | | |
| 8 | <i>Sub-Total New Projects</i> | <u>\$1.25</u> | <u>\$2.37</u> | <u>\$15.91</u> | <u>\$14.86</u> | <u>\$33.15</u> | <u>\$1.11</u> | <u>\$35.51</u> |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | Demand Side | | | | | | | |
| 13 | DSM - Electric ONLY | | \$12.08 | \$12.10 | \$12.00 | \$36.18 | | \$36.18 |
| 14 | <i>Sub-Total Demand Side</i> | | <u>\$12.08</u> | <u>\$12.10</u> | <u>\$12.00</u> | <u>\$36.18</u> | | <u>\$36.18</u> |
| 15 | | | | | | | | |
| 16 | Total | <u>\$1.25</u> | <u>\$14.45</u> | <u>\$28.01</u> | <u>\$26.86</u> | <u>\$69.32</u> | <u>\$1.11</u> | <u>\$71.68</u> |

Sierra is asking the Commission to issue an order in this 2010 IRP including and providing as follows:

LOAD FORECAST – IRP & ESP

- Approval of the long-term load forecast presented in the Load Forecast and Market Fundamentals volume, and the three-year load forecast presented in the ESP, as meeting the requirements of NAC §§704.9321 (because they are based on substantially accurate data that is adequately documented, justified demonstrated and defended), 704.9482(7) and 704.922 (because the technical appendices provide sufficient detail on how the IRP and ESP load forecast was prepared and to evaluate the validity of the assumptions and the accuracy of the data used), and comply with forecasting specifications set forth in NAC §§704.9245, 704.925, and 704.9281.

FUEL AND PURCHASED POWER FORECAST – IRP & ESP

- Approval of the fuel and purchased power forecasts presented in the Load Forecast and Market Fundamentals volume, and the three-year fuel and purchased power forecast presented in the ESP, as presenting the best and most accurate information upon which to base the planning decisions described in the Action Plan period.

CALIFORNIA TRANSACTION

- A finding that (i) the California Transaction, as a whole, is in the public interest of Nevada, and (ii) the agreements and commitments necessary to consummate the California Transaction, as a whole, are in the public interest of Nevada;

- A finding that the sale of the Kings Beach Generation Facility is in the public interest pursuant to NRS 704.7588, and authorize Sierra pursuant to NRS 704.7588 to sell the Kings Beach Generation in accordance with the terms and conditions of the Asset Purchase Agreement of the California Transaction;
- Authority and acceptance of the accounting adjustments and ratemaking treatment proposed by Sierra in Section VI of the 09-12002 Application for the agreements and commitments necessary to consummate the California Transaction , subject to Commission review in future rate cases; and
- Authority to enter into and perform in accordance with all other documents and instruments that may be reasonably necessary and incidental to the Transaction, and grant such authorization or further relief as may be deemed necessary to accomplish the purposes of the California Transaction.

GENERATION

- Authority to modify retirement dates for its remote generation facilities, and retire and decommission the remote generation located at Battle Mountain, Valley Road, Winnemucca and Clark Mountain 1 and 2.
- Authority to accumulate the costs of decommissioning and remediating the Battle Mountain, Valley Road and Clark Mountain diesel, as well as the Winnemucca CT sites in separate regulatory asset subaccounts for recovery in a future Sierra general rate case proceeding.

RENEWABLES

- Approval of the renewable energy plan presented in the Supply Side volume as presenting the best and most accurate information upon which to base the planning decisions described in the Action Plan period.
- Authority to fill Sierra's slight deficit of solar credits in 2013 through purchases from third parties or by drawing from the surplus of solar credits expected to be available at Nevada Power.

TRANSMISSION

- Acceptance of the Renewable Conceptual Transmission Plan as meeting the requirements of AB 387 (2009 Legislature).
- While Sierra is not seeking approval to proceed with new transmission projects, the Company is requesting approval of the specific modifications to budgets and/or schedules of several previously approved projects:

- Fallon 230 kV Project – Request **budget increase** from \$28,000,000 to \$35,325,000
- Bordertown to Cal Sub – Request **delay** from 2012 to 2014
- WestConnect action plan funding of \$182,000
- Blackhawk Project – Request **delay** from 2013 to 2018
- Blackhawk to Mira Loma 345 kV Line – Request **cancellation**.
- Blackhawk 345 kV Capacitor – Request **delay** from 2013 to 2018
- Plumas-Sierra Interconnection – Request **cancellation**

DEMAND SIDE PROGRAMS

- Approval of the program scopes, budgets and measures set forth in the Demand Side Plan.
- Approve the Demand Side Plan as being in compliance with ¶ 108 of the Commission’s Order dated August 11, 2006 in Docket Nos. 06-03038 and 06-04018, which directed that: “The Companies, should make an effort to expand participation to include a wider base of constituencies in this process to ensure that programs are designed to deliver energy savings measures in a manner that is both efficient and meets the needs of the constituency.”
- Approve the Evaluation of the Energy Star Lighting and Appliance Project as presented in the Project Data Sheet section of the Demand Side Plan as being in compliance with the Commission’s Orders in Docket No. 06-08020 (issued December 12, 2006, Stipulation at paragraph 2.2) and Docket Nos. 06-03038 and 06-04018 (issued August 11, 2006 at paragraph 70).
- Approve the Demand Side Plan as being in compliance with ¶ 52 of the Commission’s Order in Docket Nos. 06-03038 and 06-04018 (issued August 11, 2006) which directed the Companies to “work with Staff, BCP and builder/developer organizations to explore the feasibility and desirability of creating non-financial incentives for builder/developers utilizing energy efficiency measures.”
- Approve this proposed Demand Side Plan as being in compliance with ¶ 102.b of the Commission’s Order in Docket Nos. 06-03038 and 06-04018 (issued August 11, 2006), which directed the Companies to “conduct their own outreach, as well as coordinate with the Commission’s Consumer Complaint Resolution Division, the BCP and their own Customer Service department to identify and recruit individuals who are potential candidates for the various DSM programs offered.”

ENERGY SUPPLY PLAN

Power Procurement Plan. Sierra makes the following requests for approvals related to the Power Procurement Plan.

- Fill the estimated small open positions in 2013 with quarterly RFPs.
- Continue to monitor the portfolio on a quarterly, monthly, daily, and hourly basis. If Sierra later determines that there is a need for additional capacity and/or energy, Sierra would procure any needed firm products through a competitive bidding process, and any proposed purchases of greater than three-years in duration would be submitted to the Commission for approval in a Resource Plan filing or Amendment.
- Continue to make purchases and sales to optimize the value of the overall supply portfolio of the Company for the benefit of its retail customers .
- An affirmative finding consistent with NAC §704.9494(3) that the proposed power procurement strategy is prudent.

Physical Gas Procurement Plan. Sierra makes the following requests for approvals related to the Physical Gas Procurement Plan.

- Sierra is requesting acceptance and/or approval of its plan to continue to implement the four season laddering strategy approved by the Commission in Docket No. 09-09001 to procure physical gas. During the continuing transition from a three-season laddering strategy to a four-season laddering strategy, monthly projected physical gas requirements not procured through the laddering strategy will be procured on a season-ahead basis. Physical gas volumes will be procured at indexed prices, subject to a cap on the premium which can be exceeded with prior approval from the ERC. Consistent with the Stipulation in Docket No. 09-09001, if Sierra exceeds the cap, the Company will provide written notice to Staff and the BCP.
- Sierra is requesting an affirmative finding consistent with NAC §704.9494(3) that its physical gas procurement strategy is prudent.

Gas Transportation Plan. Sierra makes the following requests for approvals related to the Gas Transportation Plan.

- Sierra is requesting acceptance and/or approval of its gas transport plan, which includes the following elements:
 - Sierra seeks Commission approval to continue to extend existing gas transportation contracts with TransCanada, Paiute, and NWPL on an annual basis pursuant to its evergreen rights. If NWPL exercises its right to terminate Sierra's contract for storage capacity at Jackson Prairie, Sierra will exercise its right of first refusal in order to retain the capacity if, after evaluating the competing bid that would have to

be matched, it is economic to do so. Alternatively, Sierra may negotiate an extension of the existing contract in order to avoid termination by NWPL.

- Sierra will maintain alternative fuel capabilities at generation plants during peak local distribution company (“LDC”) usage, so that sufficient gas transportation capacity can be made available to the LDC. Oil backup will be used during the winter season to support generation requirements should the LDC load approach peak forecasted requirements.
- Sierra is requesting an affirmative finding consistent with NAC §704.9494(3) that its gas transportation strategy is prudent.

Gas Hedging Plan. Sierra makes the following requests for approvals related to the Gas Hedging Plan.

- Sierra is requesting acceptance and/or approval of its gas hedging strategy, which includes the following elements:
 - For delivery periods April 2011 to March 2012, the Company proposes to procure additional hedges to cover a total of 50% of projected financial gas requirements. The additional hedges will be \$2 out-of-the-money calls. Implementation of the proposed gas hedging strategy will be subject to a quarterly review of market fundamentals by the Company’s ERC. Acquisition of the additional hedges for April 2011 to March 2012 would begin upon Commission approval of the Company’s gas hedging plan, and would be completed no less than 60 days prior to the settlement month.
 - The Company will manage premiums by continuing to implement a “notification threshold” similar to the one contained in the Stipulation in Docket Nos. 06-06051 and 06-07010. The cost of the premiums will be monitored on an on-going basis, and premiums above the notification threshold will trigger consultation with Staff and BCP. The expected option premium cost associated with the Company’s gas hedging strategy is approximately 1.5% of the expected total gas expenditures per season, based upon May 2010 prices. However, option premium costs, expected total gas usage, and expected total gas expenditures will change over time. If, in any month, the expected option premium costs for a gas season (November to March or April to October) will exceed 1.5% of expected total gas expenditures for that season (as estimated in the relevant monthly PROMOD update), Sierra will promptly convene a meeting with Staff and BCP for consultation.
 - Sierra will continue quarterly workshops with Staff and BCP to review implementation of the approved gas hedging strategy.
- Sierra is requesting an affirmative finding consistent with NAC §704.9494(3) that its gas hedging strategy is prudent.

Coal Procurement Plan. Sierra makes the following requests for approvals related to the Coal Procurement Plan.

- Sierra is requesting acceptance and/or approval of its coal procurement plan, which is to continue its current practice of issuing annual RFPs to competitively solicit coal supplies. The Company will solicit bids for coals sourced in the Uinta Basin and Southern Wyoming region as well as the PRB. The successful qualification of PRB coals during 2009 for use in the Valmy units represents a fundamental change in the coal supply situation and planning environment. Thus, while a laddering strategy remains sound, Sierra is recommending a shorter procurement period with lower percentages committed in each year.
- Sierra is requesting an affirmative finding consistent with NAC §704.9494(3) that its coal procurement strategy is prudent.

Risk Management Strategy. Sierra makes the following requests for approvals related to the Risk Management Plan.

- Sierra is requesting acceptance and/or approval of its risk management strategy and a finding that the strategy identifies risks inherent in procuring and obtaining a supply portfolio and establishes the means by which the utility plans to address and balance or hedge the identified risks related to cost, price volatility and reliability.
- Sierra is requesting an affirmative finding consistent with NAC §704.9494(3) that its risk management strategy is prudent.

Additional Findings. In addition to the above findings, Sierra is requesting that the Commission make the following findings pursuant to NAC §704.9494:

- Sierra requests a finding that the ESP balances the objectives of minimizing the cost of supply, minimizing retail price volatility and maximizing the reliability of supply over the term of the plan.
- Sierra requests a finding that the ESP optimizes the value of the overall supply portfolio of the utility for the benefit of its bundled retail customers.
- Sierra requests a finding that the ESP does not contain any feature or mechanism that the Commission finds would impair the restoration of the creditworthiness of the utility or would lead to a deterioration of the creditworthiness of the utility.

SECTION VIII – INTEGRATED EVALUATION: NAC §704.9215(2)(h)

In selecting its Preferred and Alternative Plans, Nevada Power has evaluated various factors that are set forth in the Commission’s regulations, including:

- The PWRR for each alternative (see NAC 704.9357(3))
- The present worth of societal cost (“PWSC”) for each alternative (see NAC 704.9357(4))

- Whether the plan mitigates risk (see NAC 704.9357(5))
- Whether the plan provides adequate reliability (see NAC 704.9357(6)(a))
- Regulatory and financial constraints (see NAC 704.9357(6)(b))
- Whether the plan meets the RPS (see NAC 704.9357(6)(c))
- Whether the plan meets the requirements for environmental protection (see NAC 704.9357(6)(d))

In accordance with NAC 704.948(2), the Company also considered the relationship among the factors used in selecting the Preferred and Alternative Plans, including the relationship between mitigating risk, minimizing cost and volatility, and maximizing reliability. The Company selected Preferred and Alternative Plans that provide the best combination of attributes, without assigning specific weights to any particular factor.

Six alternative expansion plans were evaluated beginning in 2022 to satisfy Sierra’s growing open capacity and energy requirements, including two conventional gas-fired technologies: a gas-fired combined-cycle unit (572 MW); and a block of simple-cycle combustion turbines (581 MW). The future construction of coal-fired generation was not included in any of the cases (neither the proposed Ely Energy Center nor a third unit at the Valmy station were analyzed) due to the uncertainty with respect to future GHG regulations. Three renewable energy options also were modeled as alternatives to these conventional fossil-fired technologies (i.e., renewable energy over and above compliance with the RPS): geothermal (345 MW), solar thermal (484 MW) and wind turbine (574 MW) generation. Each renewable plan included combustion turbine additions sufficient to provide summer peak capacity values similar to the two fossil options. The last alternative was an all market purchase case. These options were selected based on unit characteristics and the Company’s strategic plan to provide clean, safe, reliable electricity to its customers at reasonable and predictable prices by:

1. Increasing energy efficiency and conservation programs (also known as demand side management or “DSM” programs);
2. Expanding renewable energy initiatives and investments; and
3. Building transmission and generation assets that will utilize the best available technology to improve the environment while balancing the mix of fuels used to produce electricity.

For each of the six plans, twelve sensitivity cases were modeled to describe a range of future load levels, market prices, and carbon allowance costs. Also, as discussed in the California Asset Sales Volume, three additional pairs of cases (three pairs to show modeling results with and without Sierra’s California load under base, high and low load forecasts) were prepared without the proposed ON Line transmission inter-tie, in order to support the analysis of Sierra’s proposed sales of its California service territory. All runs performed support the Preferred Plan.