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**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

IN THE MATTER of the Application of NEVADA POWER COMPANY, seeking approval of the 2016-2035 integrated resource plan, its three year Action Plan for 2016-2018, which include a pilot subscription solar program, the acquisition of a 25 percent share of the Silverhawk Generating Station and reliance on market purchases to meet its remaining near- term open position.

Docket No. 15-07\_\_\_\_

**VOLUME 4 OF 18**

**IRP & ESP SUMMARY**

**DESCRIPTION**

**PAGE NUMBER**

**SUMMARY**

**2**

**NEVADA POWER COMPANY**  
**INTEGRATED RESOURCE PLAN**

**SUMMARY**

**Table of Contents**

**SECTION I - INTRODUCTION: NAC 704.9215(2)(a)..... 2**

**SECTION II - FORECAST OF GROWTH: NAC 704.9215(2)(b)..... 9**

**SECTION III - DEMAND SIDE PLAN SUMMARY: NAC 704.9215(2)(c)..... 16**

**SECTION IV - SUMMARY OF THE PREFERRED PLAN: NAC 704.9215(2)(d)..... 16**

**SECTION V – SUMMARY OF THE RENEWABLE ENERGY PLAN: NAC 704.9215(2)(e).....23**

**SECTION VI - SUMMARY OF ENERGY SUPPLY PLAN: NAC 704.9215(f).....27**

    1.    POWER PROCUREMENT PLAN.....29

    2.    GAS PROCUREMENT PLAN.....30

    3.    COAL PROCUREMENT PLAN.....31

    4.    RISK MANAGEMENT STRATEGY.....31

**SECTION VII – A SUMMARY OF THE ACTIVITIES, ACQUISITIONS, AND COSTS INCLUDED IN THE ACTION PLAN OF THE UTILITY: NAC 704.9215(2)(g).....32**

    LOAD FORECAST – IRP & ESP.....32

    FUEL AND PURCHASED POWER FORECAST – IRP & ESP.....32

    GENERATION – IRP.....32

    RENEWABLES – IRP.....33

    TRANSMISSION – IRP.....33

    DEMAND SIDE PROGRAMS – IRP.....33

    ENERGY SUPPLY PLAN.....34

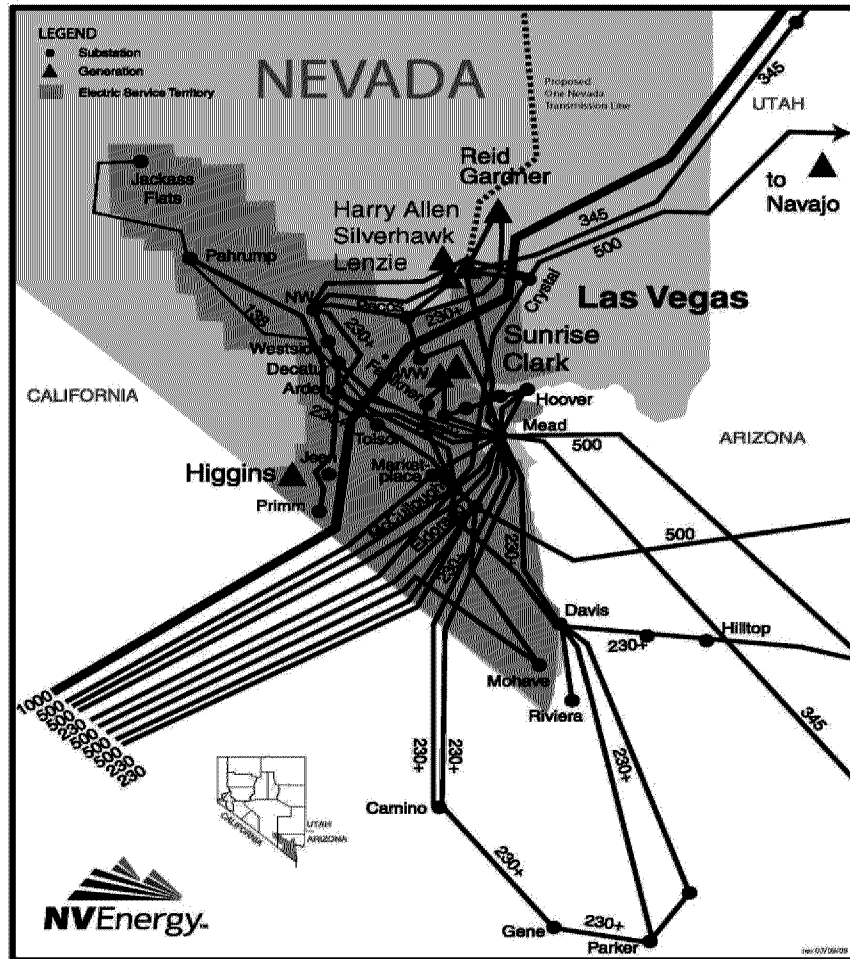
**SECTION VIII – INTEGRATED EVALUATION: NAC 704.9215(2)(h).....36**

**SECTION I - INTRODUCTION: NAC 704.9215(2)(a)**

This triennial integrated resource plan (“IRP”) covering the planning period 2016-2035 is filed by Nevada Power Company d/b/a NV Energy (“Nevada Power” or the “Company”).

*Nevada Power Described.* Nevada Power is a wholly-owned subsidiary of NV Energy, Inc. (“NVE,” formerly Sierra Pacific Resources). NVE has two utility subsidiaries: Nevada Power and Sierra Pacific Power Company d/b/a NV Energy (“Sierra”).

**FIGURE S-1  
NEVADA POWER SERVICE TERRITORY, EXISTING TRANSMISSION,  
AND EXISTING GENERATION**



Nevada Power generates, transmits and distributes electric energy to approximately 900,000 customers in Las Vegas, North Las Vegas, Henderson, Searchlight, Laughlin, and adjoining areas, including Nellis Air Force Base. Nevada Power is regulated by the Nevada Commission and the Federal Energy Regulatory Commission (“FERC”). Nevada Power’s primary place of

business is at 6226 West Sahara Avenue, in Las Vegas, Nevada. Figure S-1 shows Nevada Power's service territory along with existing transmission and generation stations.

*Resource Planning Described.* Beginning in 1983, the Legislature gave the Commission oversight authority over Nevada Power's long-term planning process. Every three years, Nevada Power formulates and presents its Preferred Plan for meeting the long-term needs of its customers. Based on projections of customers' load requirements, Nevada Power prepares a long-term IRP in which it lays out a plan to fill projected requirements with programs that reduce energy consumption (demand-side management or "DSM"), by building or purchasing generation (from conventional and renewable energy sources), building or purchasing transmission, and purchasing fuel (natural gas and coal).

*IRP and Action Plan Period.* This 2015 triennial IRP filing addresses the twenty-year planning period 2016 to 2035, and the thirty-year planning period 2016 to 2045. The Company's Preferred Plan and Alternative Plans are formulated and compared to different options using economic analysis. The IRP includes an "Action Plan" which details the steps that Nevada Power will take over the next three years to implement the recommended plan. This IRP addresses the three year Action Plan period January 1, 2016 to December 31, 2018. The Action Plan filed with this IRP includes a description of the costs, timeline, and planning activities for each recommended project. A more detailed description of each project is provided in detailed narratives that are included in the IRP.

*Nevada Power Triennial Integrated Resource Plan.* Nevada Power's 2015 IRP is being filed at a time of rapid change in the electric energy industry. Driven largely by technological changes including advances in drilling and extraction technology, and production efficiency, natural gas prices are projected to remain relatively low. Technological advances in solar photovoltaic installation and production have resulted in renewable energy prices – in particular, utility-scale solar prices –moving significantly lower over the past three years. As a result, short-run wholesale electric prices are projected to remain near or below Nevada Power's embedded prices.

Since November 2014, several large customers representing approximately 370 megawatts of peak demand and more than 2,000 gigawatt hours of retail load have notified the Company that they intend to seek authority from the Public Utilities Commission of Nevada ("Commission") to purchase energy, capacity and ancillary services from an alternative provider.<sup>1</sup> In order to utilize an alternative provider, these customers must source energy, capacity and ancillary services from a new electric resource. A provider of a new electric resource uses Nevada Power's transmission and distribution systems to deliver energy to eligible customers. Thus, eligible customers become a Distribution-Only Service ("DOS") customer of Nevada Power. Other eligible customers may

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<sup>1</sup> Four of those customers have filed applications with the Nevada Commission requesting such permission; one has provided a letter of intent.

also be exploring the option of purchasing from a provider of a new electric resource pursuant to Chapter 704B of the Nevada Revised Statutes.

With or without the movement of some large customers from bundled retail service to DOS, the Company's open capacity position in 2016 and 2017 is projected to fall safely within the 12 percent planning reserve margin. However, a 570-megawatt tolling agreement between Nevada Power and the owners of the Griffith Power Plant in northern Arizona expires after the summer of 2017. Shortly thereafter Nevada Power plans to retire 257 megawatts of coal-fired generation by December 2017 and eliminate its ownership interest in another 255 megawatts of coal-fired generation by December 2019.

In light of load uncertainty, the Company developed a Preferred Plan that pursues actions that are reasonable under each of a range of potential load scenarios. In short, the Company has made decisions that preserve options and ensure that the Company maintains the ability to provide safe, reliable electric service to customers in a cost effective manner.

*Load Forecast Uncertainty.* Typically the Company prepares its triennial IRP using three load forecast scenarios: base, low and high. Given the unique circumstances surrounding the preparation of this IRP, the Company has prepared an additional load forecast sensitivity (the "704B Low Load" Forecast). The 704B Low Load Forecast assumes that approximately 400 megawatts of large customer load will move to the Company's DOS tariff by January 1, 2016. The 704B Low Load Forecast serves as the low end of the range of reasonable forecasts against which potential resource options are analyzed. Adding the 704B Low Load Forecast to all of the case evaluations complicated this filing and expanded the analysis; however, doing so provides the appropriate range of analytical results necessary to develop strong recommendations for the three year Action Plan period.

*Case Matrix.* In each IRP, the Company analyzes resource options using at least two modeling techniques: production cost analysis is performed to determine the running cost of resource alternatives, and capital expense recovery modeling is performed to determine the fixed cost of resource alternatives. Together, production cost and capital expense recovery modeling provide the Company, the Commission and stakeholders with a basis for assessing the costs and benefits of different resource alternatives, over time. Production cost and capital expense recovery models produce a stream of revenue requirements over time; the Company then discounts the stream of revenue requirements to provide a present worth of revenue requirement or "PWRR."

The Commission's regulations governing IRP filings are comprehensive. These regulations, found at NAC 704.9005 through 704.9525, require the Company to establish multiple alternative supply side expansion plans or cases. The regulations also require the Company to perform sensitivity analyses for each alternative expansion plan. The Company tests the alternative

expansion plans or cases, under various load forecasts, fuel and purchased power price forecasts and environmental cost assumptions.

The Company developed a set of three alternative cases for meeting customers' demands for this IRP. Each case focuses on near-term decisions only, but attempts to preserve, where necessary, future resource options. In all three cases the Company proposes to make only the most necessary immediate resource commitments, leaving the need for large-scale future supply decisions to a later filing once load certainty improves.

This simplified approach has resulted in an Action Plan that seeks Commission approval of only those actions necessary to meet immediate (1-2 years) resource needs with resources that can be justified under *all* the load forecast scenarios. Three cases were considered:

1. **Case A-All market.** This case relies exclusively on purchases from the wholesale market purchases to meet needs thru 2020.
2. **Case B-Silverhawk.** This case assumes the acquisition in 2017 of the 25 percent interest in the Silverhawk generating facility owned by the Southern Nevada Water Authority ("SNWA"), approximately 130 megawatts, and relies on market purchases to meet other needs thru 2020.
3. **Case C-All Solar<sup>2</sup>.** This case assumes that Nevada Power will build a 340-megawatt solar photovoltaic ("PV") plant in 2017-2018, and use market purchases to meet other needs thru 2020.

*Other Assumptions.* The three cases described above do not address the resources that may be needed in the 2018-2020 period to replace the expiration of the 570-megawatt tolling agreement tied to the Griffith facility and the retirement of an additional 512 megawatts of coal-fired generation by 2019. The Company's Energy Supply Plan includes a strategy to utilize short term market purchases to mitigate exposure as necessary for each year of the Action Plan period.

Nevada's resource planning regulations require that the Company designate a Preferred Plan and at least one alternative plan. The Company has selected Case B as its Preferred Plan and designated Cases A and C as alternative plans. The Preferred Plan includes the acquisition of the SNWA's 25 percent interest in Silverhawk. In addition to the acquisition of 130 megawatts of capacity from a known, reliable and efficient gas-fired plant, the Company is requesting Action Plan approval to maintain options for constructing a new combined-cycle resource in southern Nevada no sooner than 2020, as well as to maintain an option to utilize an existing right of way for future renewable resource development on the Bureau of Land Management's ("BLM") Solar

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<sup>2</sup> This case also satisfies the regulatory requirement that the Company prepare, analyze and file a low carbon alternative.

Energy Zone (“SEZ”). The Company seeks to preserve these resource options with minimal Action Plan period expenditures. The Company will return to the Commission in a future IRP or IRP amendment before fully committing to these or other resource options.

In a related case, the Company has requested approval of the winning bids from the 2014 and 2015 request for proposal for renewable resources associated with the Emissions Reduction and Capacity Replacement Plan (“ERCR”). The energy and capacity contributions from these winning bids, as well as their capacity and energy contributions, are included in all of the cases evaluated for this IRP. If these two purchase power agreements (“PPAs”) for 100 megawatt solar PV projects are approved, they will be in service by year-end 2016. An additional placeholder resource was included in all system modeling for a renewable resource associated with the final 100 megawatt renewable resource required under ERCR statute; however, the Company is not seeking approval of this resource at this time. Another ERCR resource, 54 megawatts of company-owned conventional generation, is included as a placeholder resource in 2018. The Company is not seeking approval of this resource at this time.<sup>3</sup>

*More Details on the Open Position.*

Without adding new resources, Nevada Power’s open capacity position in the Base load forecast grows to over 1100 megawatts in 2018 and to almost 2000 megawatts over the next ten years. Summary Table 1 below shows the Company’s exposure under two scenarios: 1) no new additions beyond those that have already been approved by the Commission<sup>4</sup> and 2) the Company adds the resources identified in the Preferred Plan of this 2015 IRP.<sup>5</sup> Silverhawk and a new Combined Cycle in 2020.<sup>6</sup>

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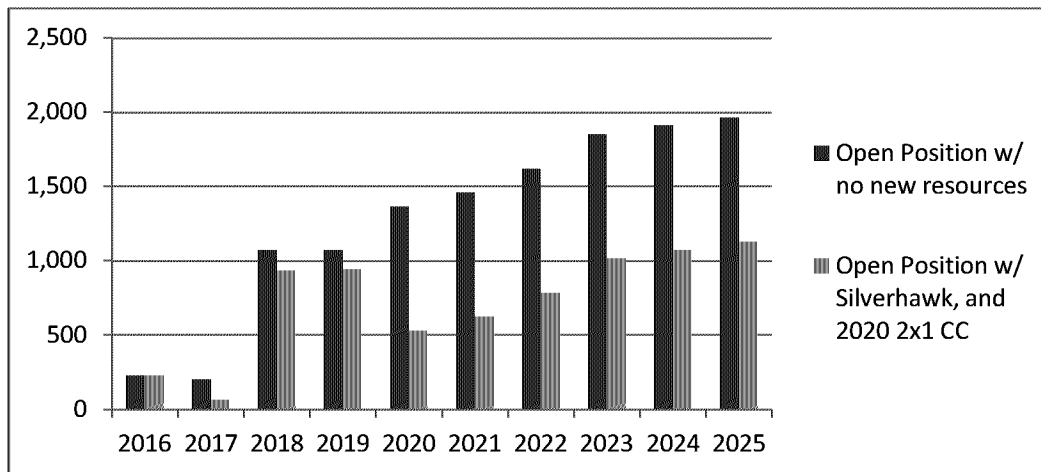
<sup>3</sup> On June 1, 2015, the last day of the 78th Session of the Nevada Legislature, Assemblyman Hambrick introduced Assembly Bill 498 (“AB 498”). Several of the Company’s customers had expressed concerns about the costs associated with implementing the final elements of NRS 704.7316. Accordingly, at the request of several of its largest customers, the Company assisted in the preparation of the legislation. The Assembly and the Senate both approved the measure the day it was introduced. The bill was signed by Governor Sandoval on June 11, 2015. The legislation requires that Nevada Power demonstrate need for the final elements of NRS 704.7316, “to the satisfaction of the Commission.” In light of the purpose of the legislation, the Company is deferring seeking Action Plan approval through this filing and the related first amendment to the ERCR plan, of three resource additions described in NRS 704.7316: the construction or acquisition of 54 MW of generating capacity pursuant to NRS 704.7316(2)(c), the construction or acquisition of 35 MW of renewable energy facilities pursuant to NRS 704.7316(2)(b), and the issuance of a request for proposals in 2016 for 100 MW of renewable energy pursuant to NRS 704.7316(2)(b)(3).

<sup>4</sup> After adding two 100 megawatt PPA contracts pending Commission approval in the 1st ERCR amendment.

<sup>5</sup> After adding two 100 megawatt PPA contracts pending Commission approval in the 1st ERCR amendment.

<sup>6</sup> The Company is only seeking approval of initial siting work associated with this resource and is not seeking approval to proceed with the full project in this filing.

**Summary Table 1:  
Open Position with no new resource additions vs. Silverhawk & 2020 CC**



*Consistency with Strategic Plan.* Nevada Power is guided by six core principles: customer service, employee commitment, environmental respect, regulatory integrity, operational excellence, and financial strength. Nevada Power’s strategic plan is to provide clean, safe, reliable electricity to its customers at reasonable and predictable prices. In determining its Preferred Plan and preparing its Action Plan, the Company developed three alternative cases for meeting customers’ demands, and tested them to determine how each performed across the range of potential load scenarios, including a scenario capturing the potential exit of approximately 400 megawatts of large customer load from bundled retail service to distribution-only service. Each case focuses on near-term decisions only, while preserving, where necessary, future resource options. In all three cases the Company proposes to make only the most necessary immediate resource commitments, leaving the need for large-scale future supply decisions to a later filing (once load certainty improves). This approach has resulted in an Action Plan that seeks Commission approval of only those actions necessary to meet immediate (1-2 years) resource needs with resources that can be justified under *all* load forecast scenarios. As such, the Action Plan is consistent with Nevada Power’s strategic plan and is supported and endorsed at the highest levels of NV Energy.

*Transmission Allocation.* Together Nevada Power and Sierra have assessed the utilization of the One Nevada Transmission Line (“ON Line”) during its first full year of operation (calendar year 2014), and determined that an adjustment in the allocation of capital costs, including the costs of the capital lease that provides Nevada Power and Sierra with transmission capacity on the ON Line, should be modified. Currently, the capital costs of the ON Line are allocated 95 percent to Nevada Power and 5 percent to Sierra. The Companies proposes that a 70 percent allocation to Nevada Power and 30 percent allocation to Sierra is more representative of the relative benefits of the On Line that each utility is experiencing.



*Requested Approval.* Nevada Power is requesting approval of the Commission to implement its Preferred Plan. The Preferred Plan includes these specific requests for approval in the Action Plan period, 2016-2018:

*DSM.* The Company is seeking approval of the preferred DSM portfolio of energy efficiency and demand response (“DR”) programs. The DSM Plan represents a moderate expansion of program activity relative to the previously approved 2012 DSM Plan. The incremental investment represented by the proposed DSM Plan has a total resource benefits-to-cost ratio of 1.81 and will bring a net benefit of \$163.1 million to the communities served by Nevada Power. Nevada Power is requesting approval of approximately \$56 million, \$60 million, and \$65 million in 2016, 2017, and 2018 respectively to implement the Preferred DSM Plan.

*Silverhawk Acquisition.* The Company is seeking approval to pursue the acquisition of SNWA’s 25 percent share of the Silverhawk generating station. Nevada Power is requesting approval of approximately \$77.3 million in 2017 to complete the transaction.

*New Generation Site.* The Company is seeking approval to pursue necessary permitting and preliminary procurement activities to develop solicitation documents for equipment and engineering, procurement and construction (“EPC”) requests for proposals. Nevada Power is requesting approval of approximately \$2.4 million in 2016 to implement the plan.

*SEZ Site Development.* The Company is seeking approval to pursue necessary preliminary development work activities to support a potential new renewable resource site in the SEZ. Nevada Power is requesting approval of approximately \$0.640 million, \$3.151 million, and \$0.199 million in 2016, 2017, and 2018 respectively to implement the plan.

*Pilot Subscription Solar Program.* The Company is seeking approval to pursue a pilot subscription solar program that would provide customers who otherwise do not have the ability to do so, the opportunity to take advantage of additional solar resources and reduce their carbon footprints. Nevada Power is requesting approval to solicit subscribers to the pilot program, and to let an RFP for, and enter into a solar PPA that would supply the resource for the pilot.

*Transmission Plan.* The Company is seeking approval to continue appropriate transmission planning activities to ensure the safety and reliability of the transmission system, primarily through its participation in WestConnect. Nevada Power is requesting

approval of approximately \$150,000 each year in the action plan period to continue participation in WestConnect as part of the Company's transmission plan.

Each of these requests was formulated with the Company's strategic plan in mind.

## **SECTION II - FORECAST OF GROWTH: NAC 704.9215(2)(b)**

*Historical Data.* In 2008, the downturn in the national and local economy began to significantly impact economic performance and electric sales in Nevada Power's service territory. The economic downturn worsened in 2009 and continued to adversely impact Nevada Power's sales through 2011. Fueled by a modest uptick in the tourism industry, sales turned positive in 2012 across all sectors, with weather normalized sales up 1.7 percent compared to the previous year. However, in 2013 year-over-year sales fell again as the tourism industry remained sluggish and the Department of Energy's Nevada Test Site ("Nevada Test Site") began to take service from Valley Electric Association.<sup>7</sup> In 2013 total sales fell 1.0 percent, and rebounded slightly to 0.1 percent growth from 2013 to 2014. Large C&I sales dropped 2.7 percent in 2013 and despite a record number of visitors, dropped again in 2014 by 0.5 percent.

Unlike sales, customer counts continued to modestly increase during the economic downturn that started in 2008. Residential customer counts were up 1.5 percent in 2012, 1.2 percent in 2013 and 1.4 percent in 2014. Despite increased customer counts, end-use efficiency, new appliance and commercial end-use standards, photovoltaic market penetration, and DSM program activity have and will continue to put downward pressure on long-term projections of customer usage (measured in terms of kWh/per customer). Residential average use is projected to decline 0.5 percent annually from 2014 through 2024 and commercial average use (small and medium size commercial customers) is projected to decline 0.3 percent annually over this period. New residential lighting standards have had the largest impact on customer usage, as 100 watt and 75 watt incandescent light bulbs were scheduled for phase out in 2013, and 60 watt and 40 watt incandescent light bulbs were phased out in 2014. A full discussion of customer usage is contained in Technical Appendix LF-1.

Overall, Nevada Power expects to see positive sales growth over the next ten years as the economy continues to improve and Nevada Power adds new customers. Sales are expected to grow at an average annual rate of 0.6 percent over the next ten years. However, the possible movement of Switch, LTD ("Switch"), from bundled retail service to DOS service negatively affects sales. The potential movement of other customers from bundled retail to DOS service is mentioned above and discussed later in this section

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<sup>7</sup> The Nevada Test Site represented a sales loss of approximately 65 GWh from 2012 to 2013.

*Load Forecast:* The peak load is projected to increase very slightly to 5,599 megawatts in 2015 from the 2014 weather-normalized peak of 5,594 megawatts in 2015. Peak demand is forecasted to average 0.7 percent annual growth through 2024. System energy is projected to grow at a slower pace (0.5 percent annual average) for the same time period. The growth rate differences between energy and peak are due to sluggish sales in the Large C&I class as well as Switch, a high load factor customer, becoming a DOS customer. Aggressive solar PV programs also reduce energy faster than peak demand.

*Population Growth.* The population forecast released by Global Insight in October 2014 projects population growth of approximately 1.6 percent annually from 2014 through 2016 for the Las Vegas-Paradise MSA. The UNLV Center for Business and Economic Research (“CBER”) July 2014 long-term forecast growth was 1.6 percent for 2014, 2.0 percent for 2015 and 1.9 percent for 2016. The CBER December 2014 short-term forecast projected population growth of 2.1 percent for 2015 and 2016. To obtain consistency between the forecast sources, rather than grafting together multiple forecasts (as has been done in prior forecasts), CBER’s long term population forecast growth was used for all years of the forecast. Population is forecasted to grow at an average annual rate of 1.4 percent through 2024.

*Employment and Output Trends.* Real output and employment drives the Small and Large Commercial and Industrial (“C&I”) customer and sales forecasts. Before the recession, the region experienced strong employment growth, averaging 4.5 percent per year between 2004 and 2007. Real output growth averaged 4.8 percent during the same period. By 2008, employment and output growth came to halt; real economic output actually fell 9.4 percent in 2009.

Nevada is now seeing a recovery in both employment and economic output. Long-term employment growth is projected to average 2.3 percent per year and output growth 3.4 percent per year from 2014 through 2024. While economic growth is positive, it is significantly lower than that experienced before the recession. It is not until 2016 that employment levels reach the peak 2007 employment level.

*Hotel/Motel Room increases.* Historically, this industry has been a significant driver of growth in Nevada Power’s service territory. Unlike in prior periods, no major hotel/casino properties are currently under construction or scheduled to open within the foreseeable future. Only one property with more than 500 rooms was included in the 2015 IRP Forecast: the SLS (former Sahara – 1,613 rooms) which opened on August 25, 2014. The Genting Group’s proposed 3,000 room resort is not included in the 2015 IRP Forecast as Nevada Power has not received definitive plans for building the electric infrastructure.

*Distribution-Only Service (“DOS”).* The 2015 IRP Forecast assumes that 13,706 megawatt-hours of energy consumed by the City of Henderson transitioned to DOS-only service on November 1, 2014. The City of Henderson has since delayed this transition to February 1, 2016.

The 2015 IRP Forecast also assumes Switch will begin to take DOS service on May 1, 2015. Switch's transition to DOS service has since been delayed as well. As was mentioned above, a separate "704B Low Load Forecast" reflecting the potential movement of several other large customers to DOS service has also been prepared. This forecast assumes that approximately 395 megawatts and 2,700 gigawatt-hours move to DOS service in 2016.

*Weather Assumption.* The 2015 IRP Forecast assumes a 20-year normal weather period of October 1994 through September 2014. This period applies to heating-degree-days, cooling-degree-days and peak-day temperatures.

*DSM, DR and Net Metering.* In the 2015 IRP Forecast, DSM reductions were based on January 2015 preliminary budgets developed for the 2016-2018 DSM Filing. In the 2015 IRP Forecast, aggregated incremental DSM savings reductions from 2015 through 2024 are expected to be 1,474 gigawatt-hours. DR energy reductions are expected to be 83 gigawatt-hours through 2024, including the EcoFactor thermostat optimization program. Peak reduction from controllable and non-Controllable DR is expected to rise from 191 megawatts of avoided capacity to 289 megawatts by 2024.

The impact of the Company's small net metering projects includes sales reductions for the SolarGenerations forecasts. In addition, 28 megawatts of solar capacity is expected to be installed outside the program from 2015 through 2016 and four megawatts of solar capacity is assumed to be installed outside the program annually beginning in 2017. Aggregated incremental energy reductions are forecasted to be 487 gigawatt-hours from 2015 through 2024, and peak demand is expected to be reduced by 109 megawatts for the same time period.

*Embedding the DSM in the sales models.* Due to increases in investments in DSM projects in recent years, it is probable that much of the incremental forecasted DSM is already accounted for by the sales regression models. Therefore, for the 2015 IRP Forecast, DSM savings that could be identified with an end-use (e.g., cooling and lighting), were used to modify the appliance end use indices. This methodology is the same as that used in the 2014 Emissions Reduction Capacity Replacement forecast and other recent forecasts.

*Low, Base and High Scenarios.* Consistent with prior practice (and Commission regulations), high and low load forecast scenarios were developed for the 2015 IRP Forecast. The high and low load forecast scenarios are based on different assumptions of economic, demographic and hotel/motel room growth than the base forecast. The assumptions for DSM, DR, EV and net metering were not varied in these forecasts. As noted, a 704B Low Load Forecast scenario was also developed for use in supply planning.

*Required Figures.* Figure S-2 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-3 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. Solar PV is not classified as DSM, so is included in the “without DSM” numbers.

Figure S-4 shows the base, DOS Exit and low forecast scenario system peak forecast comparisons and Figure S-5 shows the same information for system energy. Figure S-6 is a summary of the DSM peak megawatt impacts by program.

**FIGURE S-2  
LOW, BASE, AND HIGH SALES SCENARIOS  
WITH AND WITHOUT DSM**

Year	SALES (GWH) WITH DSM			SALES (GWH) WITHOUT DSM/DR		
	LOW	BASE	HIGH	LOW	BASE	HIGH
2015	20,848	21,033	21,212	21,024	21,209	21,388
2016	20,674	21,051	21,422	21,029	21,406	21,777
2017	20,593	21,190	21,731	21,131	21,728	22,269
2018	20,618	21,344	22,180	21,330	22,056	22,892
2019	20,644	21,465	22,423	21,523	22,344	23,302
2020	20,614	21,536	22,612	21,661	22,583	23,659
2021	20,643	21,672	22,865	21,861	22,890	24,083
2022	20,747	21,890	23,208	22,134	23,278	24,595
2023	20,827	22,083	23,513	22,322	23,579	25,009
2024	20,915	22,290	23,836	22,487	23,862	25,408
2025	20,963	22,456	24,110	22,602	24,095	25,749
2026	21,044	22,654	24,415	22,736	24,346	26,107
2027	21,136	22,867	24,735	22,879	24,611	26,478
2028	21,252	23,109	25,089	23,046	24,904	26,883
2029	21,337	23,318	25,408	23,183	25,164	27,253
2030	21,418	23,522	25,711	23,316	25,420	27,608
2031	21,503	23,732	26,024	23,453	25,682	27,974
2032	21,608	23,962	26,358	23,610	25,965	28,361
2033	21,667	24,144	26,639	23,714	26,191	28,686
2034	21,761	24,368	26,968	23,848	26,456	29,056
2035	21,850	24,591	27,300	23,971	26,711	29,420

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

Year	PEAK DEMAND (MW) WITH DSM			PEAK DEMAND (MW) WITHOUT DSM/DR		
	LOW	BASE	HIGH	LOW	BASE	HIGH
2015	5,549	5,599	5,652	5,767	5,817	5,871
2016	5,536	5,648	5,760	5,797	5,910	6,024
2017	5,530	5,692	5,856	5,839	6,002	6,168
2018	5,534	5,730	5,963	5,881	6,078	6,312
2019	5,527	5,746	6,014	5,923	6,143	6,413
2020	5,531	5,777	6,079	5,959	6,207	6,511
2021	5,541	5,815	6,153	6,005	6,281	6,621
2022	5,574	5,878	6,253	6,074	6,381	6,760
2023	5,597	5,930	6,341	6,124	6,463	6,876
2024	5,626	5,985	6,432	6,162	6,534	6,983
2025	5,646	6,034	6,513	6,194	6,600	7,082
2026	5,667	6,091	6,602	6,239	6,678	7,193
2027	5,695	6,151	6,693	6,281	6,755	7,301
2028	5,744	6,228	6,797	6,342	6,851	7,430
2029	5,769	6,286	6,886	6,377	6,920	7,533
2030	5,803	6,354	6,981	6,425	7,003	7,644
2031	5,830	6,415	7,075	6,467	7,082	7,752
2032	5,847	6,467	7,161	6,509	7,160	7,860
2033	5,883	6,535	7,250	6,553	7,240	7,968
2034	5,919	6,606	7,348	6,594	7,317	8,075
2035	5,935	6,658	7,432	6,614	7,375	8,164

**FIGURE S-4  
704B LOW LOAD SCENARIO: PEAK DIFFERENCE WITH BASE AND  
LOW LOAD FORECAST (MW)**

<b>SYSTEM PEAK (MW)</b>							
Year	EXIT	BASE	LOW	Difference with:			
				Base	% Diff	Low	% Diff
2015	5,599	5,599	5,549	0	0.0%	50	0.9%
2016	5,255	5,648	5,536	(393)	-7.0%	(281)	-5.1%
2017	5,298	5,692	5,530	(394)	-6.9%	(232)	-4.2%
2018	5,332	5,730	5,534	(398)	-6.9%	(202)	-3.7%
2019	5,352	5,746	5,527	(394)	-6.9%	(175)	-3.2%
2020	5,382	5,777	5,531	(395)	-6.8%	(149)	-2.7%
2021	5,419	5,815	5,541	(396)	-6.8%	(122)	-2.2%
2022	5,486	5,878	5,574	(392)	-6.7%	(88)	-1.6%
2023	5,538	5,930	5,597	(392)	-6.6%	(59)	-1.1%
2024	5,592	5,985	5,626	(393)	-6.6%	(34)	-0.6%
2025	5,644	6,034	5,646	(390)	-6.5%	(2)	0.0%
2026	5,696	6,091	5,667	(395)	-6.5%	29	0.5%
2027	5,756	6,151	5,695	(395)	-6.4%	61	1.1%
2028	5,840	6,228	5,744	(388)	-6.2%	96	1.7%
2029	5,898	6,286	5,769	(388)	-6.2%	129	2.2%
2030	5,965	6,354	5,803	(389)	-6.1%	162	2.8%
2031	6,026	6,415	5,830	(389)	-6.1%	196	3.4%
2032	6,077	6,467	5,847	(390)	-6.0%	230	3.9%
2033	6,147	6,535	5,883	(388)	-5.9%	264	4.5%
2034	6,217	6,606	5,919	(389)	-5.9%	298	5.0%
2035	6,269	6,658	5,935	(389)	-5.8%	334	5.6%

