

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Application of NEVADA POWER COMPANY d/b/a NV Energy and SIERRA PACIFIC POWER COMPANY d/b/a NV Energy, seeking approval to add 600 MW of renewable energy and 480 MW of energy storage capacity, among other items, as part of their joint 2022-2041 integrated resource plan, for the three year Action Plan period 2022-2024, and the Energy Supply Plan period 2022-2024.

Docket No. 21-06____

VOLUME 5 OF 18

NARRATIVE AND TECHNICAL APPENDIX LOAD FORECAST, MARKET FUNDAMENTALS, FUEL AND PURCHASE POWER PRICE FORECASTS NARRATIVE DEMAND SIDE PLAN

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**NEVADA POWER COMPANY d/b/a NV Energy
SIERRA PACIFIC POWER COMPANY
d/b/a NV ENERGY**

**2021 JOINT INTEGRATED RESOURCE PLAN
(2022-2041)**

**LOAD FORECAST, MARKET FUNDAMENTALS
AND FUEL AND PURCHASED POWER PRICE
FORECAST**

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SECTION 1 – LOAD FORECAST

A. LOAD FORECAST

The load forecast for the 2021 Joint IRP (“2021 IRP Forecast”) was completed in March 2021 and covers calendar years 2022 through 2041. The 2021 IRP Forecast updates several inputs relative to the load forecast that was filed in Docket No. 20-07023, the Fourth Amendment to the Companies 2018 Joint IRP (“4th Amendment Forecast”). These updates, as well as highlights of the 2021 IRP Forecast, are discussed below.

Load Forecast Summary. The 2021 IRP Forecast database was updated with actual data through December 2020. Consistent with NAC § 704.923(2), Table LF-1 is a summary of the forecasted peak and energy from 2021 through 2041. It is important to note that NV Energy peak demands may be lower than the combined total of Sierra and Nevada Power due to diversity between the two systems. i.e., they do not necessarily peak at the same time.

The Companies’ forecast includes anticipated demand reductions and uncertainties associated with the COVID-19 pandemic; COVID-19’s impact is expected to fade, reaching pre-COVID-19 trend by the end of 2021. The 4th Amendment Forecast attempted to capture the negative effects of COVID-19 known at that time, but has been updated in this 2021 IRP Forecast.

The economic data used in the 4th Amendment Forecast was modified for Nevada-only data beginning in late March 2020 as Las Vegas and northern Nevada (for Sierra) including COVID impacts were not available at the time the forecast was created. The 2021 IRP Forecast has been updated with an economic outlook issued in November 2020. The results of using this data and updated population forecasts shows statewide sales recovering to 2019 levels by the end of 2021. See Table LF-2 for a comparison of the forecasts, and Technical Appendix LF-1 for further details on the development of the economic data and after the model sales adjustments. See Table LF-2 for a comparison of the forecasts and Technical Appendix LF-1 for further details on the development of the economic data and after the model sales adjustments.

For the period 2021 through 2031, the Compound Annual Growth Rate (“CAGR”) of the annual sales for the Companies is 1.0 percent. Sales increase from 31,267 GWh in 2021 to 34,117 in 2031. The CAGR of the Companies’ coincident peak is also 1.0 percent. Demand is expected to increase from 7,763 MW in 2021 to 8,350 MW by 2031. Given significant difference in geographic location and customer mix, Nevada Power and Sierra generally do not peak on the same day or hour. The load diversity as a result of combining Nevada Power and Sierra load forecasts results in a combined system peak demand that is lower than the sum of the individual company peak demands. The peak demand CAGR is higher than the native energy CAGR due to the anticipated transition of a large Sierra mining customer to distribution only service (“DOS”) in 2022.

The forecast includes updates for forecast inputs including: Demand Side Management (“DSM”), Demand Response (“DR”), solar photovoltaic (“solar PV”) net energy metered (“NEM”) reductions, reductions for customers taking DOS under NRS Chapter 704B, electric vehicle growth, and expected change in large customer business activity.

TABLE LF-1
ANNUAL PEAK (MW) AND NATIVE ENERGY (GWH)

| Year | Native Energy (GWh) | | | Peak (MW) | | |
|-------|---------------------|--------|--------|-----------|-------|--------|
| | NVE | NPC | Sierra | NVE | NPC | Sierra |
| 2021 | 29,044 | 19,737 | 9,307 | 7,763 | 5,880 | 1,923 |
| 2022 | 28,837 | 20,298 | 8,539 | 7,715 | 5,949 | 1,801 |
| 2023 | 29,552 | 20,767 | 8,785 | 7,843 | 6,038 | 1,840 |
| 2024 | 30,223 | 21,112 | 9,111 | 7,947 | 6,125 | 1,876 |
| 2025 | 30,525 | 21,181 | 9,344 | 7,999 | 6,127 | 1,913 |
| 2026 | 30,848 | 21,290 | 9,557 | 7,994 | 6,160 | 1,877 |
| 2027 | 31,322 | 21,544 | 9,778 | 8,106 | 6,243 | 1,902 |
| 2028 | 31,717 | 21,705 | 10,012 | 8,217 | 6,314 | 1,939 |
| 2029 | 31,992 | 21,815 | 10,178 | 8,225 | 6,337 | 1,962 |
| 2030 | 32,128 | 21,908 | 10,219 | 8,287 | 6,372 | 1,964 |
| 2031 | 32,279 | 22,042 | 10,237 | 8,350 | 6,410 | 1,973 |
| 2032 | 32,477 | 22,221 | 10,256 | 8,398 | 6,460 | 1,974 |
| 2033 | 32,620 | 22,347 | 10,273 | 8,457 | 6,504 | 1,981 |
| 2034 | 32,783 | 22,491 | 10,293 | 8,535 | 6,574 | 1,990 |
| 2035 | 32,955 | 22,640 | 10,316 | 8,518 | 6,590 | 1,995 |
| 2036 | 33,171 | 22,827 | 10,344 | 8,598 | 6,620 | 2,006 |
| 2037 | 33,313 | 22,945 | 10,368 | 8,648 | 6,663 | 2,017 |
| 2038 | 33,484 | 23,090 | 10,394 | 8,689 | 6,698 | 2,023 |
| 2039 | 33,654 | 23,231 | 10,423 | 8,764 | 6,758 | 2,034 |
| 2040 | 33,849 | 23,396 | 10,452 | 8,771 | 6,793 | 2,043 |
| 2041 | 33,976 | 23,500 | 10,475 | 8,852 | 6,844 | 2,051 |
| CAGR | | | | | | |
| 21-31 | 1.1% | 1.2% | 1.0% | 0.8% | 0.9% | 0.3% |
| 31-41 | 0.5% | 0.7% | 0.2% | 0.6% | 0.7% | 0.4% |

Notes:

(1) NVE Peak adjusted for diversity.

(2) Hourly value of Company coincident peak

TABLE LF-2
COMPARE SUMMER PEAK DEMAND (MW)

| Year | Current | | | IRP 4th Amendment | | | Difference | | |
|------|---------|-------|--------|-------------------|-------|--------|------------|-----|--------|
| | NVE | NPC | Sierra | NVE | NPC | Sierra | NVE | NPC | Sierra |
| 2021 | 7,763 | 5,880 | 1,923 | 7,500 | 5,581 | 1,810 | 263 | 299 | 113 |
| 2022 | 7,715 | 5,949 | 1,801 | 7,504 | 5,726 | 1,681 | 211 | 223 | 120 |
| 2023 | 7,843 | 6,038 | 1,840 | 7,667 | 5,836 | 1,732 | 176 | 202 | 108 |
| 2024 | 7,947 | 6,125 | 1,876 | 7,794 | 5,884 | 1,789 | 153 | 241 | 87 |
| 2025 | 7,999 | 6,127 | 1,913 | 7,869 | 5,949 | 1,809 | 130 | 178 | 104 |
| 2026 | 7,994 | 6,160 | 1,877 | 7,880 | 6,007 | 1,830 | 114 | 153 | 47 |
| 2027 | 8,106 | 6,243 | 1,902 | 7,943 | 6,068 | 1,855 | 163 | 175 | 47 |
| 2028 | 8,217 | 6,314 | 1,939 | 8,015 | 6,103 | 1,873 | 202 | 211 | 66 |
| 2029 | 8,225 | 6,337 | 1,962 | 8,071 | 6,152 | 1,882 | 154 | 185 | 80 |
| 2030 | 8,287 | 6,372 | 1,964 | 8,136 | 6,200 | 1,893 | 151 | 172 | 71 |
| 2031 | 8,350 | 6,410 | 1,973 | 8,206 | 6,262 | 1,906 | 144 | 148 | 67 |
| 2032 | 8,398 | 6,460 | 1,974 | 8,260 | 6,309 | 1,921 | 138 | 151 | 53 |
| 2033 | 8,457 | 6,504 | 1,981 | 8,306 | 6,357 | 1,932 | 151 | 147 | 49 |
| 2034 | 8,535 | 6,574 | 1,990 | 8,362 | 6,395 | 1,945 | 173 | 179 | 45 |
| 2035 | 8,518 | 6,590 | 1,995 | 8,417 | 6,438 | 1,958 | 101 | 152 | 37 |
| 2036 | 8,598 | 6,620 | 2,006 | 8,485 | 6,482 | 1,971 | 113 | 138 | 35 |
| 2037 | 8,648 | 6,663 | 2,017 | 8,542 | 6,536 | 1,987 | 106 | 127 | 30 |
| 2038 | 8,689 | 6,698 | 2,023 | 8,587 | 6,578 | 2,003 | 102 | 120 | 20 |
| 2039 | 8,764 | 6,758 | 2,034 | 8,635 | 6,613 | 2,018 | 129 | 145 | 16 |
| 2040 | 8,771 | 6,793 | 2,043 | 8,701 | 6,650 | 2,029 | 70 | 143 | 14 |
| 2041 | 8,852 | 6,844 | 2,051 | 8,741 | 6,696 | 2,045 | 111 | 148 | 6 |

CAGR

| | | | | | | |
|-------|------|------|------|------|------|------|
| 22-31 | 0.8% | 0.8% | 1.0% | 0.9% | 0.9% | 1.3% |
| 32-41 | 0.5% | 0.6% | 0.4% | 0.6% | 0.6% | 0.6% |

Notes:

(1) NVE Peak adjusted for diversity.

(2) Hourly value of Company coincident peak

1. Load Forecast Process

The forecast is developed using a bottom-up approach. Sales and customers are forecasted at the customer class level and then used to project system energy and peak demand. Separate forecasts are constructed for Sierra and Nevada Power; the system forecast is derived by combining the Sierra and Nevada Power hourly load forecasts. Monthly econometric models are estimated for each of the three primary rate classes: residential, small commercial and industrial (“Small C&I”) and large commercial and industrial (“Large C&I”) customers. For the residential and Small C&I classes, separate models are estimated for customer counts and average use per customer; total sales are calculated as the product of customer and average use forecasts. Large C&I is modeled at the total sales level. Large C&I models exclude mines, casinos and other large customers that are individually forecasted. Forecasts for these customers are based on discussions with the Companies’ Major Account, Economic Development Energy Delivery personnel and customer input related to expected business activity and associated sales and demand impacts. Class sales

forecasts are adjusted for Customer-specific forecasts including DOS-related sales loss. Other classes, including public authority, street lighting and irrigation, sales are forecasted based on recent historical data.

Sales model inputs include:

1. Population, which drives the residential and Small C&I customer count models.
2. For residential use per customer, the models are driven by weather (cooling and heating degree days), average price per kWh, household income and persons per household, Companies-sponsored energy efficiency (“EE”) programs. Model end-use intensity projections are adjusted for EE programs savings.
3. Small C&I use per customer and Large C&I total sales models; weather, price, real gross regional product, employment for Sierra’s Large C&I model, hotel room counts for Nevada Power’s Large C&I model, and the Companies’ sponsored EE programs through end-use intensity adjustments.
4. Additional adjustments: Class sales forecasts are adjusted for expected solar PV rooftop market penetration, DR programs, incremental electric vehicle additions, and large customer adjustments discussed above. As noted above, additional adjustments were made to customer counts and sales to reflect the impacts of the COVID-19 pandemic.

Class-level sales forecasts drive both system energy and peak demand. The monthly peak load forecast is based on an econometric model that relates monthly peak-demand to peak-day weather conditions and end-use energy requirements (cooling, heating, and base-use); cooling, heating, and base-use requirements that are derived from the customer-class sales models. The system energy forecast is based on the historical relationship between delivered energy and monthly billed sales; historical energy to billed sales ratio is applied to the monthly billed sales forecast. A baseline system hourly load forecast is derived by combining, energy, peak, and normalized system hourly load profile. The baseline hourly load forecast is then adjusted for DOS load reductions, PV hourly load projections, expected electric vehicle charging loads, DR hourly load impact provided by the DSM department. Further details on the econometric models are detailed in the Technical Appendix.

2. Load Forecast Inputs

The following items are updated for each new load forecast. Each item and the manner in which it impacts the 2021 IRP Forecast is described below.

a. Population Forecast

In the 2021 IRP Forecast, Nevada Power’s models include a Clark County population forecast based on the historical population series through 2010 (intercensal population series) from the State Demographer, and the certified series from 2011-2018. For 2019, Clark County’s 2019 population growth rate was used. For 2020, the Companies used the growth rate from a University

of Nevada, Las Vegas’ Center for Business and Economic Research’s (“CBER”) presentation dated March 26, 2020. Thereafter, the 2021 IRP Forecast used an extrapolation of historical population series using the annual growth rates obtained from the June 2020 CBER release of the long-term forecast, with minor adjustments to smooth forecasted growth.

Sierra’s models use northern Nevada’s population history and forecast, which is Nevada minus Clark County’s population. In the updated forecast, the Sierra historical population was developed from the State Demographer intercensal series through 2010, the certified series from 2011 through 2019. Then the forecast used the State Demographer’s 2020 forecast with minor adjustments to smooth the forecasted growth.

Table LF-3 shows the population forecasts for NV Energy, Nevada Power and Sierra from 2021 through 2041. For the 10-year period from 2021 through 2031, the overall CAGR used in the forecast is 1.6 percent and 1.2 percent for NV Energy, 1.7 percent and 1.3 percent for Nevada Power and 1.4 percent and 1.1 percent for Sierra for the 2021 to 2041 period.

**TABLE LF-3
POPULATION FORECAST**

| Year | Population | | |
|-------|------------|-----------|-----------|
| | NVE | NPC | Sierra |
| 2021 | 3,864,898 | 2,361,000 | 1,503,898 |
| 2022 | 3,938,307 | 2,403,000 | 1,535,307 |
| 2023 | 4,023,535 | 2,458,000 | 1,565,535 |
| 2024 | 4,101,062 | 2,509,000 | 1,592,062 |
| 2025 | 4,171,705 | 2,555,000 | 1,616,705 |
| 2026 | 4,235,818 | 2,598,000 | 1,637,818 |
| 2027 | 4,293,257 | 2,636,000 | 1,657,257 |
| 2028 | 4,346,101 | 2,671,000 | 1,675,101 |
| 2029 | 4,393,062 | 2,702,000 | 1,691,062 |
| 2030 | 4,435,717 | 2,731,000 | 1,704,717 |
| 2031 | 4,474,406 | 2,757,000 | 1,717,406 |
| 2032 | 4,510,054 | 2,781,000 | 1,729,054 |
| 2033 | 4,544,990 | 2,804,000 | 1,740,990 |
| 2034 | 4,579,006 | 2,826,000 | 1,753,006 |
| 2035 | 4,611,648 | 2,847,000 | 1,764,648 |
| 2036 | 4,644,328 | 2,868,156 | 1,776,172 |
| 2037 | 4,677,239 | 2,889,469 | 1,787,770 |
| 2038 | 4,710,383 | 2,910,941 | 1,799,442 |
| 2039 | 4,743,761 | 2,932,572 | 1,811,189 |
| 2040 | 4,777,375 | 2,954,364 | 1,823,011 |
| 2041 | 4,808,444 | 2,976,318 | 1,832,126 |
| CAGR | | | |
| 21-31 | 1.6% | 1.7% | 1.4% |
| 21-41 | 1.2% | 1.3% | 1.1% |

b. Normal Weather Conditions

One of the substantive changes in the 2021 IRP Forecast, is that normal heating degree days (“HDD”) and cooling degree days (“CDD”) are based on expected increases in average temperatures, which results in increasing CDD and decreasing HDD over the forecast period. A recent study conducted by Itron found average temperatures in Las Vegas have been increasing 0.11 degrees per year (1.1 degrees per decade). For Reno, average temperatures have potentially been increasing at even a faster rate (though more research is needed on Reno weather trends). Based on several climate studies, average temperatures are expected to increase through the forecast period. Itron developed trended CDD and HDD that reflect expected increase in average temperature. Trended monthly CDD and HDD are used to develop the monthly sales and energy forecast. Weather normalized sales and energy for the 4th Amendment Forecast were based on the traditional 20-year CDD and HDD average for the period January 2000 through December 2019.

While increasing average temperatures impact energy usage, its uncertain how increasing average temperature will impact peak demand. Peak demand is primarily driven by extreme temperatures; further analysis by Itron has shown that there has been little increase in peak-day temperatures. The 2021 IRP Forecast assumes constant peak-day normal temperature through the forecast period. While there has been little change in maximum annual temperature over the last 50 years, there have been more days of extreme hot-day temperatures and fewer days of extreme cold-day temperatures. To the extent the peaks are driven by cumulative temperatures over several days, an increase in the number of hot days could impact peaks. Research is ongoing in this area.

Sierra peak-day normal CDD and HDD are based on the maximum annual temperature over the most recent 20-year period. Nevada Power peak-day degree-days are based on the last five-years; the shorter period results in peak-demand forecasts that are more consistent with recent system peaks. Table LF-4 compares the difference between the two methodologies between the system peak values forecasted for 2021-2041.

Another change to the 2021 IRP Forecast is that daily degree-days are calculated using unrounded maximum and minimum temperatures; this results in slightly lower CDDs and slightly higher HDDs. Technical Appendix LF-1 includes a description of the process for developing trended normal HDD and CDD.

**TABLE LF-4
WEATHER NORMALIZED PEAK (MW) COMPARISON**

| Year | Nevada Power | | | | Sierra | | | |
|------|--------------|---------|--------|----------|----------|---------|--------|----------|
| | TrndNrml | 20yrAvg | Change | % Change | TrndNrml | 20yrAvg | Change | % Change |
| 2021 | 5,864 | 5,880 | -16 | -0.3% | 1,941 | 1,923 | 18 | 0.9% |
| 2022 | 5,926 | 5,949 | -23 | -0.4% | 1,841 | 1,801 | 40 | 2.2% |
| 2023 | 6,038 | 6,038 | 0 | 0.0% | 1,895 | 1,840 | 55 | 3.0% |
| 2024 | 6,166 | 6,125 | 41 | 0.7% | 1,947 | 1,876 | 72 | 3.8% |
| 2025 | 6,248 | 6,127 | 121 | 2.0% | 1,993 | 1,913 | 80 | 4.2% |
| 2026 | 6,401 | 6,160 | 241 | 3.9% | 1,968 | 1,876 | 92 | 4.9% |
| 2027 | 6,424 | 6,243 | 181 | 2.9% | 2,007 | 1,902 | 105 | 5.5% |
| 2028 | 6,461 | 6,314 | 147 | 2.3% | 2,061 | 1,939 | 123 | 6.3% |
| 2029 | 6,513 | 6,337 | 176 | 2.8% | 2,090 | 1,961 | 129 | 6.6% |
| 2030 | 6,580 | 6,372 | 208 | 3.3% | 2,104 | 1,964 | 140 | 7.1% |
| 2031 | 6,732 | 6,410 | 322 | 5.0% | 2,122 | 1,972 | 150 | 7.6% |
| 2032 | 6,818 | 6,460 | 358 | 5.5% | 2,132 | 1,972 | 159 | 8.1% |
| 2033 | 6,790 | 6,504 | 286 | 4.4% | 2,146 | 1,979 | 167 | 8.4% |
| 2034 | 6,888 | 6,574 | 314 | 4.8% | 2,172 | 1,988 | 184 | 9.3% |
| 2035 | 6,941 | 6,590 | 351 | 5.3% | 2,188 | 1,993 | 195 | 9.8% |
| 2036 | 7,145 | 6,620 | 525 | 7.9% | 2,212 | 2,004 | 208 | 10.4% |
| 2037 | 7,318 | 6,663 | 655 | 9.8% | 2,234 | 2,016 | 219 | 10.8% |
| 2038 | 7,291 | 6,698 | 593 | 8.8% | 2,245 | 2,021 | 224 | 11.1% |
| 2039 | 7,256 | 6,758 | 498 | 7.4% | 2,268 | 2,033 | 236 | 11.6% |
| 2040 | 7,332 | 6,793 | 539 | 7.9% | 2,295 | 2,041 | 254 | 12.4% |
| 2041 | 7,396 | 6,844 | 552 | 8.1% | 2,312 | 2,047 | 266 | 13.0% |

c. Behind the Meter Energy Storage

For the 2021 IRP Forecast, the Companies made no adjustments to the 4th Amendment Forecast related to energy storage. As of March 2021, there are approximately 675 customers with electric storage capacity. Currently, there is not enough historical charging and discharging data to determine peak and hourly load impacts. With relatively few systems currently in place, expected impacts are small.

Until the Companies have sufficient data regarding the operating characteristics of behind-the-meter storage (either stand-alone or coupled with solar PV), adjustments (either increases, decreases, and/or shifts in load) are difficult to model. The Companies expect storage impacts in future forecasts once there is sufficient hourly storage operating data.

d. Impacts on Energy Savings from DSM Action Plan

Forecasted reductions for the 2021 IRP Forecast are based on a goal of 1.10 percent (including DR) of forecasted sales for each company. This compares to the 1.15 percent statewide goal (including DR) used for the 4th Amendment Forecast. More details on the impacts of energy savings to the forecast update are contained in Technical Appendix LF-1.

e. Solar PV Programs

The Companies made reductions in system demand and energy requirements to account for energy produced from private generation (i.e., solar PV) that is used by the customer at their premises. Projected incremental peak reductions of 160 MW at Nevada Power and 7 MW at Sierra by 2024 are based on the installed capacity of 346 MW and 21 MW for each respective company. More discussion of the impact of net metering on the load forecast is contained in Technical Appendix Item LF-1.

f. Mining Industry

The Companies expect mining load in Sierra's territory to increase 70 GWh through 2024, excluding Newmont's transition to DOS in February 2022. The increase is mainly due to two current mines that are expanding their operations. More details of the mine load forecast are contained in Technical Appendix LF-1.

g. Other Large Customers

Table LF-5 below compares the updated large customer forecast to the 4th Amendment Forecast's large customer forecast. More details of these individual customer forecasts are contained in Technical Appendix LF-1.

**TABLE LF-5
LARGE CUSTOMER FORECASTS**

| Nevada Power | | | | | | |
|--------------|---------|----|----------------|-----|------------|-----|
| Year | Current | | IRP 4th Amend. | | Difference | |
| | GWh | MW | GWh | MW | GWh | MW |
| 2021 | 87 | 29 | 142 | 43 | -55 | -14 |
| 2022 | 226 | 58 | 283 | 72 | -57 | -14 |
| 2023 | 330 | 78 | 431 | 97 | -102 | -19 |
| 2024 | 414 | 90 | 562 | 111 | -148 | -22 |
| 2025 | 477 | 94 | 580 | 111 | -103 | -18 |

| Sierra | | | | | | |
|--------|---------|-----|----------------|-----|------------|-----|
| Year | Current | | IRP 4th Amend. | | Difference | |
| | GWh | MW | GWh | MW | GWh | MW |
| 2021 | 1,061 | 158 | 1,185 | 185 | -124 | -27 |
| 2022 | 1,282 | 193 | 1,464 | 226 | -182 | -34 |
| 2023 | 1,591 | 235 | 1,773 | 275 | -182 | -40 |
| 2024 | 1,870 | 262 | 2,122 | 309 | -252 | -47 |
| 2025 | 2,076 | 289 | 2,257 | 323 | -182 | -34 |

h. Electric Vehicles

Due to more aggressive programs offered by the Companies, along with Nevada state policy encouraging electric vehicle use, the updated 2021 IRP Forecast assumes that electric vehicles, as a percentage of new vehicles in Nevada will increase to 11 percent by 2030 and remain flat thereafter. As a result, the updated statewide incremental electric vehicle energy sales (beginning in 2021) is projected to reach approximately 263 GWh by 2030 (combined for both Companies). This is an increase over the previous 4th Amendment Forecast which assumed a 6 percent increase by 2030.

i. End-Use Saturation and Efficiency Trends

The Companies used a combined end-use saturation and average stock efficiency projections to generate projected energy intensities. Mountain census-level residential end-use saturations were derived from the 2020 U.S. Energy Information Administration (“EIA”) Annual Energy Outlook (“AEO”) developed for use by Itron, Inc. For the residential class, the intensities were benchmarked to the data provided by ADM Associates based on 2015 residential load research data and appliance survey results, the same as for the 4th Amendment Forecast. Minor adjustments were made to smooth forecasted lighting for Nevada Power and lighting and miscellaneous intensities for Sierra. Commercial end-use intensities are also based on the 2020 AEO for the Mountain Census Division. See Technical Appendix LF-1 for more details.

j. Forecast Scenarios

The November 2021 GI optimistic and pessimistic economic forecasts were used to develop the high and low forecasts. Large customer load was adjusted for each forecast to represent optimistic (high forecast) or pessimistic (low forecast) assumptions. Table LF-6 is a summary of the base, high and low forecasts for each company.

TABLE LF-6
BASE, HIGH AND LOW PEAK FORECASTS (MW)

| Year | Nevada Power | | | Sierra | | |
|------|--------------|-------|-------|--------|-------|-------|
| | Low | Base | High | Low | Base | High |
| 2021 | 5,860 | 5,880 | 5,904 | 1,917 | 1,923 | 1,937 |
| 2022 | 5,909 | 5,949 | 6,003 | 1,781 | 1,801 | 1,830 |
| 2023 | 5,957 | 6,038 | 6,119 | 1,799 | 1,840 | 1,877 |
| 2024 | 5,994 | 6,125 | 6,222 | 1,820 | 1,876 | 1,920 |
| 2025 | 5,949 | 6,127 | 6,236 | 1,843 | 1,913 | 1,969 |
| 2026 | 5,949 | 6,160 | 6,288 | 1,800 | 1,876 | 1,949 |
| 2027 | 6,005 | 6,243 | 6,396 | 1,827 | 1,902 | 1,997 |
| 2028 | 6,053 | 6,314 | 6,495 | 1,865 | 1,939 | 2,061 |
| 2029 | 6,061 | 6,337 | 6,552 | 1,890 | 1,961 | 2,095 |
| 2030 | 6,084 | 6,372 | 6,624 | 1,893 | 1,964 | 2,096 |
| 2031 | 6,113 | 6,410 | 6,703 | 1,900 | 1,972 | 2,106 |
| 2032 | 6,159 | 6,460 | 6,788 | 1,901 | 1,972 | 2,105 |
| 2033 | 6,201 | 6,504 | 6,875 | 1,909 | 1,979 | 2,111 |
| 2034 | 6,269 | 6,574 | 6,993 | 1,917 | 1,988 | 2,121 |
| 2035 | 6,284 | 6,590 | 7,060 | 1,923 | 1,993 | 2,125 |
| 2036 | 6,312 | 6,620 | 7,144 | 1,933 | 2,004 | 2,135 |
| 2037 | 6,355 | 6,663 | 7,242 | 1,944 | 2,016 | 2,147 |
| 2038 | 6,391 | 6,698 | 7,337 | 1,950 | 2,021 | 2,151 |
| 2039 | 6,458 | 6,758 | 7,460 | 1,962 | 2,033 | 2,162 |
| 2040 | 6,496 | 6,793 | 7,545 | 1,971 | 2,041 | 2,170 |
| 2041 | 6,548 | 6,844 | 7,652 | 1,977 | 2,047 | 2,174 |

3. NRS CHAPTER 704B ANNUAL LIMITS FOR THE 2022-2024 ACTION PLAN PERIOD

Pursuant to subsection 6 of NRS 704.741, the Companies are required to include in their triennial Joint IRP a proposal for annual limits on the total amount of energy and capacity that eligible NRS Chapter 704B customers may be authorized to purchase from providers of new electric resources during the action plan period. The proposal must be a product of a sensitivity analysis that, at a minimum, addresses load growth, import capacity, system constraints and the effect of eligible customers purchasing less energy and capacity than authorized by the proposed annual limit.

Subsection 6 of NRS 704.741 further requires that the Companies' proposal must include:

- (a) A forecast of the load growth;
- (b) The number of eligible customers that are currently being served by or anticipated to be served by NV Energy;
- (c) Information concerning NV Energy's infrastructure that is available to accommodate market-based new electric resources;
- (d) Proposals to ensure the stability of rates and the availability and reliability of electric service; and
- (e) For each year of the plan, impact fees applicable to each megawatt or each megawatt hour to account for costs reflected in the base tariff general rate and base tariff energy rate paid by end-use customers of the electric utility.

To effectuate the above mandates of NRS 704.741(6), the Commission, on May 27, 2020, submitted to the Legislative Counsel Bureau ("LCB") a proposed regulation for pre-adoption review.¹ By amending NAC 704.925, the proposed regulation implements the above mandates and establishes maximum annual limits at 50 percent of projected large commercial and industrial ("Large C&I") load growth during the applicable three-year action plan period. In addition, the proposed regulation provides that:

In developing the proposal for annual limits on the total amount of energy and capacity that eligible customers may be authorized to purchase from providers of new electric resources and the forecasts in the plan, the utility or utilities must conduct a sensitivity analysis that addresses: load growth, import capacity, system constraints, and the effect of eligible customers purchasing less energy and capacity than authorized by the proposed annual limit. The utility or utilities may conduct additional sensitivity analyses including additional factors to be considered by the Commission. Any such analyses must be clearly explained and supported by the utility or utilities.

¹ Docket No. 19-06029.

a. Load growth.

NV Energy anticipates that, over the three-year action plan period (January 2022 to December 2024), Nevada Power's total load will increase by 1,443,000 MWh, and Sierra's load will decrease by 175,000 MWh. Total Large C&I loads are anticipated to increase by 945,428 MWh for Nevada Power and to decrease by 310,607 MWh for Sierra during this same period.

To determine load growth eligible for the 704B process, the 2021 year-end loads were considered as the base loads for the calculation of the annual limits. For Nevada Power, the effects of COVID-19 cause a significant reduction in 2020 and 2021 loads, thereby overstating the load growth in the forecast period. As Table 704B-1 below demonstrates, 2020 saw more than 400,000 MWh reduction in Large C&I loads compared to 2019 at Nevada Power, and the forecasted load for 2021 is still significantly below pre-COVID-19 levels. To exclude these pandemic-caused load anomalies, a three-year average of the sales from 2017 to 2019 were used for Nevada Power. Thus, to protect the remaining customers of Nevada Power in accordance with NRS 704B.310(6), COVID-19 load rebound is eliminated from the calculation of the annual limits available for the 2022-2024 action plan period. As Table 704B-2 shows, Sierra has not experienced a similar decrease in Large C&I load during the pandemic. In fact, Sierra's Large C&I load slightly increased in 2020 compared to 2019 and is expected to further increase in 2021. Therefore, a similar base load adjustment is not needed for Sierra.

In addition to the base load adjustments, adjustments were made on account of customers on special pricing tariffs by excluding sales of these customers from the calculations for both Nevada Power and Sierra loads, as reflected in the Excluded Sales column. The resulting base load, as reflected in Tables 704B-1 and 704B-2, equals 5,429,457 MWh for Nevada Power and 2,023,309 MWh for Sierra. Subtracting these base loads from the 2024 load projections results in 194,344 MWh Large C&I action plan load growth for Nevada Power and 187,188 MWh for Sierra.

Applying the maximum annual limits prescribed by the proposed regulation, without applying any of the sensitivity analysis factors, yields 97,172 MWh total action plan period limit for Nevada Power and 93,594 MWh for Sierra.

Please review the Load Forecast narrative, Technical Appendix LF-1, and testimony of Mr. Jaz Linville for more information on the forecasted load growth, and the testimony of Mr. Tim Pollard on the application of the forecasted load growth to the proposed annual limits.

b. Import capacity.

During the action plan period, severe import capacity constraints are anticipated to exist at Sierra. Currently, Sierra has 331 MW of reserved transmission capacity placed in a reservation queue. Sierra is not projected to satisfy this outstanding import capacity need during the action plan period. Sierra's import capacity constraint will be resolved as the elements of Greenlink Nevada are put into place pursuant to the Commission's order in Docket No. 20-07023. Thus, due to the current import capacity constraints, analysis of this factor places the annual limits for Sierra for the action plan period at zero MW.

Nevada Power’s available import capacity is 3,214 MW. In light of this ample open import capacity, NV Energy does not propose to impose any limits on the amount of energy and capacity available to eligible 704B applicants on account of import capacity restrictions.

For more information on import capacity, please see the Transmission Plan in the Supply Side Narrative and the testimony of Sachin Verma.

c. System constraints.

Besides the import capacity constraints described above, NV Energy does not anticipate any other system constraints that would require lowering the annual limits as reasonably derived through other sensitivity factors under consideration.

d. The effect of eligible customers purchasing less energy and capacity than authorized by the proposed annual limit.

The sensitivity analysis yields the maximum action plan annual limit of 97,172 MWh for Nevada Power, which translates into an average hourly 11.1 MW load as shown in Table 704B-1 below. For Sierra, as shown in Table 704B-2 below, the absence of available transmission capacity requires that the limit be set at zero MWh or MW during the action plan period.

**TABLE 704B-1
NEVADA POWER NRS CHAPTER 704B ELIGIBLE LOADS**

| Year | Nevada Power | | |
|---|--------------|---------|-----------|
| | Excluded | | Total |
| | Large C&I | Sales | |
| 2017 | 5,552,360 | - | 5,552,360 |
| 2018 | 5,433,469 | 2,060 | 5,431,409 |
| 2019 | 5,308,598 | 3,997 | 5,304,601 |
| 2020 | 4,894,777 | 28,636 | 4,866,141 |
| 2021 | 5,095,544 | 90,928 | 5,004,616 |
| 2022 | 5,619,286 | 229,836 | 5,389,450 |
| 2023 | 5,918,459 | 333,075 | 5,585,384 |
| 2024 | 6,040,972 | 417,171 | 5,623,801 |
| 2025 | 6,103,591 | 480,108 | 5,623,482 |
| Base Load (2017-2019 avg.) | 5,431,476 | 2,019 | 5,429,457 |
| End of period load (12/31/2024) | 6,040,972 | 417,171 | 5,623,801 |
| Load Growth | | | 194,344 |
| Eligible load @ 50% of Large C&I sales growth | | | 97,172 |
| Average hourly MWh | | | 11.1 |
| Sensitivity Analysis | | | |
| Import Capacity | | | - |
| System Constraints | | | - |
| Lower 704B Purchases | | | - |
| Additional Factors | | | - |
| Proposed eligible load | | | 97,172 |
| Average hourly MWh | | | 11.1 |

**TABLE 704B-2
SIERRA NRS CHAPTER 704B ELIGIBLE LOADS**

| Year | Sierra | | |
|---|-----------|----------------|-----------|
| | Large C&I | Excluded Sales | Total |
| 2017 | 2,899,328 | 1,259,986 | 1,639,342 |
| 2018 | 3,201,727 | 1,514,113 | 1,687,614 |
| 2019 | 3,456,609 | 1,693,018 | 1,763,591 |
| 2020 | 3,472,628 | 1,621,741 | 1,850,887 |
| 2021 | 3,733,006 | 1,709,697 | 2,023,309 |
| 2022 | 2,929,785 | 838,974 | 2,090,811 |
| 2023 | 3,142,963 | 996,295 | 2,146,668 |
| 2024 | 3,422,399 | 1,211,902 | 2,210,497 |
| 2025 | 3,622,684 | 1,368,268 | 2,254,416 |
| Base Load (2021) | 3,733,006 | 1,709,697 | 2,023,309 |
| End of period load (12/31/2024) | 3,422,399 | 1,211,902 | 2,210,497 |
| Load Growth | | | 187,188 |
| Eligible load @ 50% of Large C&I sales growth | | | 93,594 |
| Average hourly MWh | | | 10.7 |
| Sensitivity Analysis | | | |
| Import Capacity | | | (93,594) |
| System Constraints | | | - |
| Lower 704B Purchases | | | - |
| Additional Factors | | | - |
| Proposed eligible load | | | - |
| Average hourly MWh | | | - |

NV Energy proposes that the annual limits for Nevada Power for the 2022-2024 action plan period be set at the maximum allowable level of 97,172 MWh (approx. 11.1 MW). This total action plan annual limits amount can be made available in any number of tranche combinations: broken down equally among each of the three years (3.7 MW per year), front loaded, or back loaded. To allow the entire limit to leave at the beginning of the period, and to make the calculation of the impact on remaining customers simpler, Nevada Power proposes that the entire annual limits amount (11.1 MW) be available in the first year of the action plan. Considering the above calculations and NV Energy's proposed limit for Nevada Power, the effect of eligible customers purchasing less energy and capacity than authorized by the proposed annual limits would be negligible.²

² As provided for in the proposed regulations, if the proposed annual limit is not fully used in the first year of the action plan, the unused amount will be carried forward to the second and/or third years of the action plan.

Pursuant to NRS 704.741(2)(a)(1), a load forecast of future retail electric demand must not include the amount of energy and capacity proposed as annual limits on the total amount of energy and capacity that eligible NRS Chapter 704B customers may be authorized to purchase from their providers of new electric resources. Accordingly, NV Energy created a load forecast version that removes the eligible MWh sales for Nevada Power during the 2022-2024 period, which is summarized in Section VII of the Technical Appendix LF-1. The reduction is spread to hours across the year following the load shape of the LGS-3 large commercial customer classes to spread the sales across the year. Due to the relatively small amount of the proposed annual limits, the removal of these loads from the forecast results in the same preferred plan as if the loads were included.³

In the case of eligible customers located in Nevada Power's service territory purchasing less energy and capacity than authorized by the proposed annual limits, the maximum of 11.1 MW would have to be served in addition to the native load forecasted in this 2021 Joint IRP. Considering Nevada Power's anticipated peak loads and reserve margin, Nevada Power expects that it will be able to serve the additional load with minimal effect on rates paid by its customers and no effect on the reliability of service.

e. The number of eligible customers that are currently being served by or anticipated to be served by NV Energy.

Two tables are provided below summarizing the number of current customers who are eligible for the 704B process. The tables update the information provided on January 31, 2019, in Late-Filed Exhibit 12 submitted to the Commission in Docket No. 18-09015 for Nevada Power and Late-Filed Exhibit 24 submitted in Docket 18-08007 for Sierra. Table 704B-3 summarizes the number of eligible customers for Nevada Power, and Table 704B-4 provides the corresponding information for Sierra.

**TABLE 704B-3
NEVADA POWER 704B ELIGIBLE CUSTOMER COUNTS**

| Size | Government | | | Non-Government | | |
|---------|------------|----------|-------------------------|----------------|----------|-------------------------|
| | Customers | Premises | Total Annual Load (MWH) | Customers | Premises | Total Annual Load (MWH) |
| 1-3 MW | 9 | 113 | 117,656 | 44 | 49 | 590,210 |
| 3-5 MW | 2 | 21 | 65,570 | 6 | 9 | 187,137 |
| 5-10 MW | 3 | 101 | 189,523 | 7 | 13 | 401,279 |
| 10+ MW | 3 | 260 | 553,484 | 1 | 1 | 176,372 |
| Total | 17 | 495 | 926,232 | 58 | 72 | 1,354,998 |

Notes:

1) Annual MWH from 5/2020-4/2021

2) Aggregation of governmental accounts based largely on name

3) Non-Government accounts does not include contiguous properties that when summed could meet load requirements.

4) Due to COVID-19 impacts, some premises were adjusted and added based on historical annual sales information.

³ The Companies seek guidance from the Commission as to whether, in future filings, the preferred plan should be built off the load forecast with or without the proposed annual limits. The Companies' concerns lay with a scenario in which the Commission authorizes annual limits significantly different from the proposed and the change materially alters the analysis performed for Companies' preferred or alternate plans.

**TABLE 704B-3
SIERRA 704B ELIGIBLE CUSTOMER COUNTS**

| Size | Government | | | Non-Government | | |
|---------|------------|----------|-------------------------|----------------|----------|-------------------------|
| | Customers | Premises | Total Annual Load (MWH) | Customers | Premises | Total Annual Load (MWH) |
| 1-3 MW | 3 | 8 | 53,832 | 27 | 29 | 402,095 |
| 3-5 MW | 2 | 2 | 68,651 | 7 | 10 | 244,110 |
| 5-10 MW | 1 | 3 | 56,464 | 3 | 5 | 207,634 |
| 10+ MW | 0 | 0 | 0 | 5 | 10 | 2,344,793 |
| Total | 6 | 13 | 178,947 | 42 | 54 | 3,198,632 |

Notes:

1) Annual MWH from 5/2020-4/2021

2) Aggregation of governmental accounts based largely on name

3) Non-Government accounts does not include contiguous properties that when summed could meet load requirements.

f. Information concerning NV Energy’s infrastructure that is available to accommodate market-based new electric resources.

Besides the import constraints identified for Sierra, NV Energy has sufficient infrastructure to accommodate market-based new electric resources that could be used by 704B loads subject to the annual limits as reasonably derived through the sensitivity factors under consideration.

g. Proposals to ensure the stability of rates and the availability and reliability of electric service.

The regulations submitted by the Commission to the LCB require a three-year transition period, during which a 704B applicant continues to pay bundled service charges, and limit energy and capacity allocable to 704B applicants to 50 percent of large commercial and industrial sectors’ growth. Together with other customer-protection features included in the proposed regulation, the transition period and the maximum limits are designed to ensure the stability of rates for remaining customers and the availability and reliability of electric service for the entire customer base.

h. For each year of the plan, impact fees applicable to each megawatt or each megawatt hour to account for costs reflected in the base tariff general rate and base tariff energy rate paid by end-use customers of the electric utility.

Pursuant to the proposed regulations, each approved NRS Chapter 704B applicant will continue to pay its otherwise applicable Base Tariff General Rate during the transition period. In accordance with the proposed regulations, Nevada Power has calculated the Net-Base Tariff Energy Rate (“Net-BTER”) of \$0.03290 per kWh, and the Variable O&M Credit (Charge) of \$-0.00001 per kWh for the action plan period.

For more information on the calculation of the Net-BTER charge and the Variable O&M credit, please see the testimony of Tim Pollard.

SECTION 2 - MARKET FUNDAMENTALS

A. POWER FUNDAMENTALS

1. WESTERN ELECTRIC COORDINATING COUNCIL CAPACITY AND ENERGY

Regional Profile. The Companies are members of the Western Electricity Coordinating Council (“WECC”). WECC is the Regional Entity (“RE”) responsible for compliance monitoring and enforcement and oversees reliability planning and assessments. In addition, WECC provides an environment for the development of Reliability Standards and the coordination of the operating and planning activities of its members as set forth in the WECC bylaws. There are six REs given authority by the North American Electric Reliability Corporation (“NERC”) and the Federal Energy Regulatory Commission (“FERC”). Of those six entities, WECC oversees the largest and most geographically diverse region, known as the Western Interconnection (“WI”). WECC’s footprint extends from Canada to Mexico and includes the provinces of Alberta and British Columbia, the northern portion of Baja California, Mexico, and all or portions of the 14 Western states between.¹ Figure MF-1 depicts the various NERC regions and sub-regions, including the WECC.

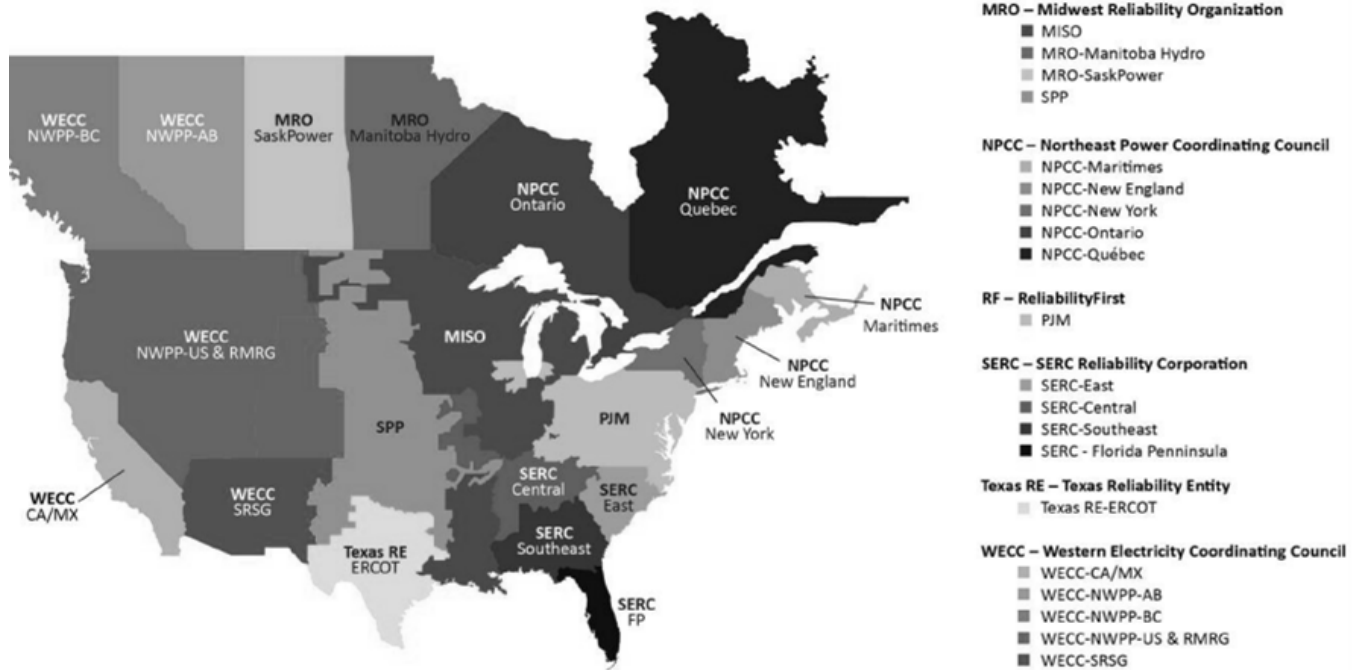
In order to conduct NERC reliability assessments, NERC further divides the REs into 20 assessment areas, also shown in Figure MF-1 below. This level of granularity allows NERC to better evaluate resource adequacy and ensure deliverability constraints between and among assessment areas are accounted for.

The WECC assessment area is divided into four sub-regions: California/Mexico (“CA/MX”), the Northwest Power Pool (“NWPP”), which is further divided into the NW-Canada and NW-US areas, and the Southwest Reserve Sharing Group (“SRSG”). The NWPP sub-region also includes the Rocky Mountain Reserve Group (“RMRG”) sub-region. These subregional divisions are used for this assessment as they are structured around reserve sharing groups that have similar annual demand patterns and similar operating practices.² The Companies reside in the NWPP US & RMRG sub-region.

¹ <https://www.wecc.org/Pages/AboutWECC.aspx>

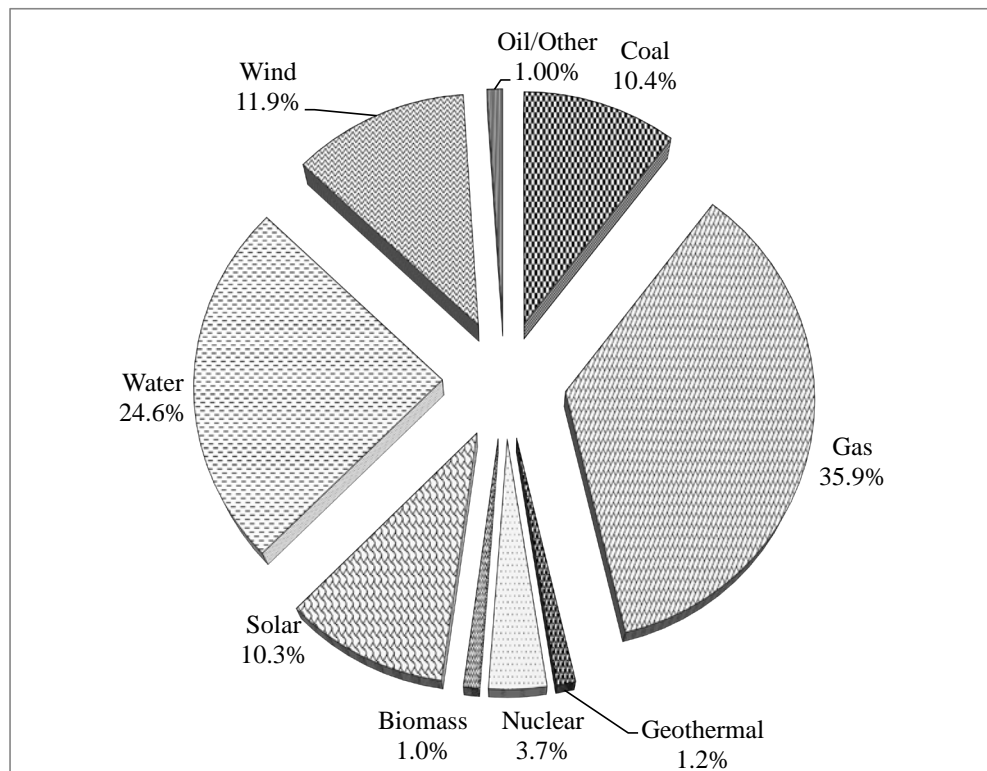
² https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2020.pdf

**FIGURE MF-1
NERC REGIONS AND SUB-REGIONS**



WECC Existing Capacity and Energy. Figure MF-2 shows the capacity diversity in the WECC region and the prevalence of gas-fired and hydroelectric generation.

**FIGURE MF-2
WECC CAPACITY BY FUEL TYPE (2020)**

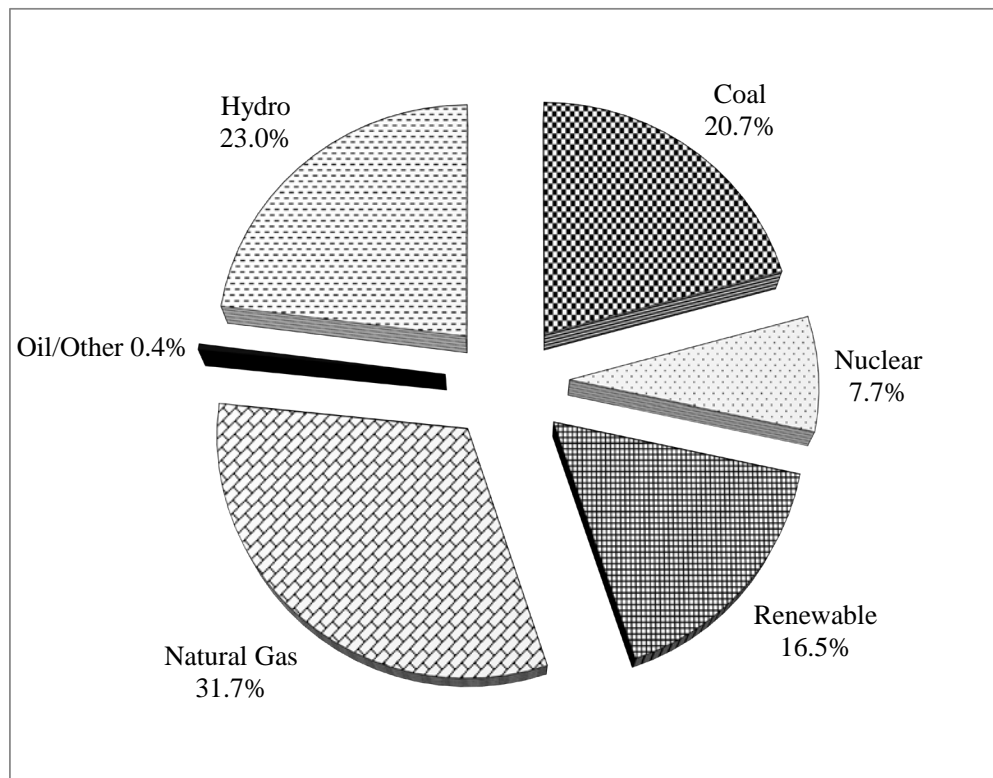


Source: S&P Global Market Intelligence, EIA Form 860

Based on data collected by S&P Global Market Intelligence, the WECC region's existing capacity as of 2020 is approximately 225 gigawatts ("GW"). This existing capacity includes 23 GW of coal, 81 GW of gas, 8 GW of nuclear, 56 GW of hydro, 27 GW of wind, 23 GW of solar, 3 GW of geothermal, 2 GW of biomass resources, and 2 GW other resources. Renewable capacity continues to increase each year and currently stands at about 49 percent of total WECC capacity.

The mix of generation (net energy) in 2019³ by fuel type for the United States portion of the WECC is shown in Figure MF-3.

FIGURE MF-3
2019 WECC GENERATION BY FUEL TYPE



Source: S&P Global Market Intelligence, EIA Form 923

Hydroelectric Generation. The WECC benefits from the river systems in the Pacific Northwest, which provide emission free electricity from hydroelectric dams. Hydroelectricity has long aided the West in maintaining a reduced dependence on other fuels that are typically burned to generate electric power nationwide. The available generation from hydroelectric dams depends upon seasonal precipitation and snow-pack levels in mountain areas that feed the rivers during the spring run-off season. The hydroelectric plants located in the Columbia River Basin typically comprise slightly more than one-third of all the hydroelectric capacity in the United States.

Natural Gas-Fired Generation. The majority of thermal electric plants in the WECC continue to be gas-fired combined-cycle units and gas combustion turbines. The operational flexibility and reliability provided by these units makes them suitable partners for intermittent renewable resources, such as wind and solar generation facilities. The addition of gas-fired capacity, along with the acceleration in shale gas production, has also stimulated upgrades to Western gas pipeline systems, increasing both the connectivity of physical gas between producing sub-basins and the

³ Data for 2020 will not be available until the fall of 2021.

take-away capacity out of the Rockies region, which are further described in in the Natural Gas Fundamentals section below.

Coal-Fired Generation. Coal production in the United States has continued to decline since reaching a high point in 2008. Coal-fired generators face many challenges including more stringent air quality standards, anticipated regulation of greenhouse gas emissions and low natural gas prices. Coal consumption for power plant electric generation, accounting for more than 90 percent of total U.S. coal use, is forecast to continue to decline through 2050 with the retirement of additional coal-fired electricity generating units.⁴

Renewables. The West is characterized by high renewable potential. The Southwest has the highest solar potential in the nation and is the only region in the United States with areas of significant geothermal potential. There are also areas of significant wind potential, including along the eastern edge of the Rocky Mountains and along the Columbia River. The growth of wind and solar resources is driven by a combination of political, economic and social factors. Technological improvements have increased rates of penetration, especially for solar photovoltaic (“PV”). Renewables technologies are forging ahead in terms of cost competitiveness and market share. This is not limited to conventional large-scale solar and onshore wind technologies, but also newer technologies like offshore wind, battery storage, and distributed solar applications.

Battery Storage. Batteries allow utilities to store electricity that was generated during the day by solar facilities and use it at night. Stationary storage also could store power from windy days for later use. Adding a battery to an existing wind or solar plant can provide access to high-value hours. Batteries co-located with solar or wind projects are starting to compete, in many markets and without subsidy, with gas-fired generation for the provision of ‘dispatchable power’ that can be delivered whenever the grid needs it (as opposed to only when the wind is blowing, or the sun is shining). Electricity demand is subject to pronounced peaks and lows inter-day. Meeting the peaks has previously been the preserve of technologies such as open-cycle gas turbines and gas reciprocating engines, but these technologies are now facing competition from batteries with anything from one to four hours of energy storage. The cost improvements in lithium-ion batteries are opening up new opportunities for batteries to balance a renewables-heavy generation mix.

⁴ U.S Energy Information Administration (“EIA”), “Annual Energy Outlook” (February 2021).

Energy Imbalance Market (“EIM”).

The California Independent System Operator’s (“CAISO”) EIM) is a real-time energy market, the first of its kind in the western United States. The EIM’s advanced market system automatically finds low-cost energy to serve real-time consumer demand across the West. Since its launch, the EIM has enhanced grid reliability and generated cost savings for its participants. In addition to its economic advantages, the EIM improves the integration of renewable energy, leading to a cleaner, “greener” grid.⁵ The EIM began financially binding operation on November 1, 2014, by optimizing resources across the CAISO and PacifiCorp Balancing Authority Areas (“BAAs”). NV Energy began participating in December 2015. The EIM uses a sophisticated system to automatically balance demand every five minutes with the lowest cost energy available across the combined grid.

The first quarter 2021 EIM Benefits Report published by the CAISO estimates that the EIM has yielded more than \$1.28 billion in total benefits for all participants since the market was launched in 2014. The measured benefits of participation in the EIM include cost savings, increased integration of renewable energy, and improved operational efficiencies including the reduction of the need for real-time flexible reserves. Sharing resources across a larger geographic area reduces greenhouse gas emissions by utilizing renewable generation that otherwise would have been turned off. The quantified environmental benefits from avoided curtailments of renewable generation from 2015 to-date reached 599,144 metric tons of CO₂, roughly the equivalent of avoiding the emissions from 125,967 passenger cars driven for one year.⁶ A map of the active and pending EIM participants is provided in Figure MF-4.

Participants - Active

- Los Angeles Department of Water & Power – entered 2021
- Public Service Company of New Mexico – entered 2021
- Turlock Irrigation District – entered 2021
- Salt River Project – entered 2020
- Seattle City Light – entered 2020
- Balancing Authority of Northern California – entered 2019
- Idaho Power Company – entered 2018
- Powerex – entered 2018
- Portland General Electric – entered 2017
- Puget Sound – entered 2016
- Arizona Public Service – entered 2016
- NV Energy – entered 2015
- PacifiCorp – entered 2014
- California ISO – entered 2014

Participants - Pending

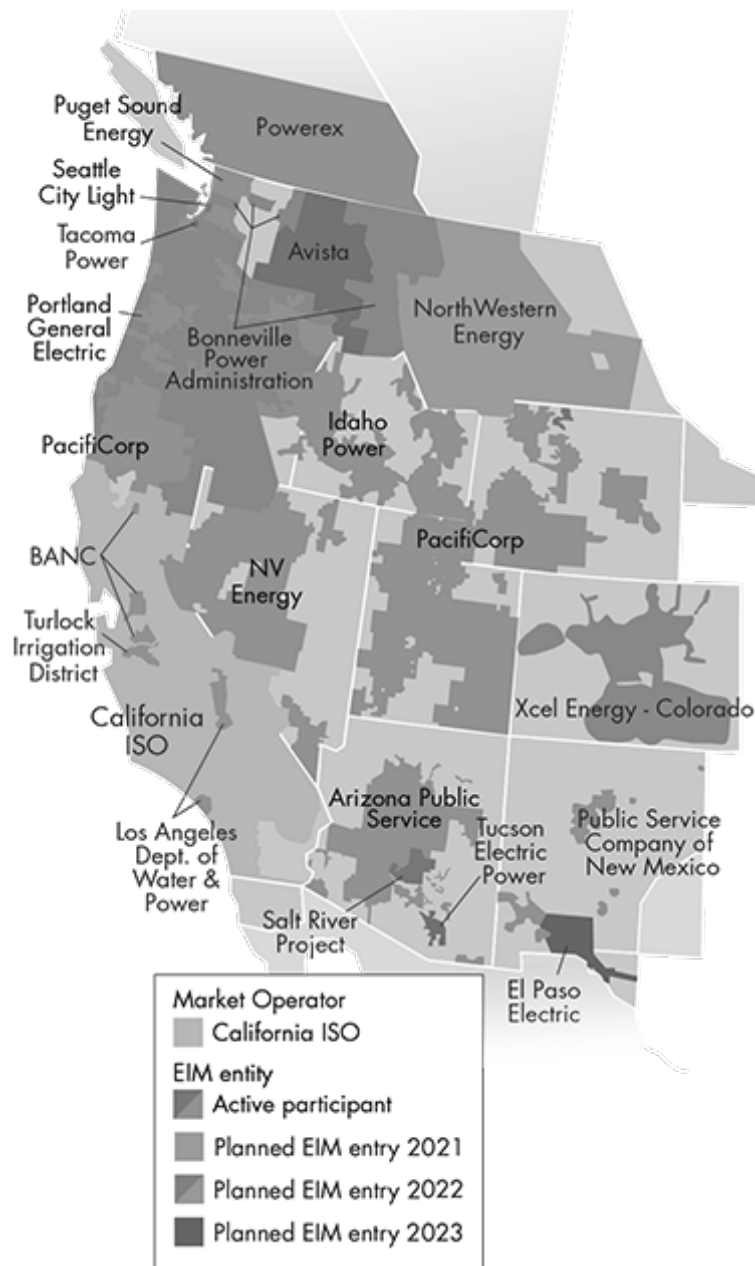
- NorthWestern Energy – entry 2021
- Avista – entry 2022

⁵ <https://www.westerneim.com/Pages/About/default.aspx>

⁶ <https://www.westerneim.com/Documents/ISO-EIMBenefitsReportQ1-2021.pdf>

- Tucson Electric Power – entry 2022
- Tacoma Power – entry 2022
- Bonneville Power Administration – entry 2022
- Xcel Energy – Colorado – entry 2022
- Avangrid – entry 2023
- El Paso Electric – entry 2023

FIGURE MF-4
WESTERN EIM ACTIVE AND PENDING PARTICIPANTS



2. RESOURCE ADEQUACY

To ensure reliability during the transition to greater reliance on renewable resources, emerging resource and energy adequacy issues must be addressed. Planning for long-term resource adequacy is becoming increasingly complex with a resource mix that is more unpredictable and less energy assured. To evaluate the projected resource adequacy (generation resource reserve margins), NERC prepares the Long-Term Reliability Assessment (“LTRA”) an annual assessment of anticipated resource reserve margins.

Planning Reserve Margins (Anticipated Reserve Margin or “ARM” and Prospective Reserve Margin or “PRM”) are calculated and reported for each of the WECC sub-regions and provide an indication of the ability of those sub-regions to meet their load requirements with internal generation and imports from other sub-regions or zones under the specified conditions. Planning Reserve Margins (anticipated or prospective) are calculated by finding the difference between the amount of projected on-peak capacity and the forecasted peak demand and then dividing this difference by the forecasted peak demand.

NERC assesses resource adequacy by evaluating each assessment area’s planning reserve margins relative to its Reference Margin Level⁷ (“RML”) a “target” or requirement based on traditional capacity planning criteria. The projected resource capacity used in the evaluations is reduced by known operating limitations (e.g., fuel availability, transmission limitations, environmental limitations) and compared to the RML, which represents the desired level of risk based on a probability-based loss-of-load (“LOL”) analysis.

On the basis of the five-year projected reserves compared to the established RMLs, NERC determines the risk associated with the projected level of reserve and concludes in terms of the following:

- Adequate: ARM⁸ is greater than RML.
- Marginal: ARM⁹ is lower than RML and PRM is higher than RML.
- Inadequate: Both ARMs and PRMs are less than the RML and Tier 3 resources are unlikely to advance.

⁷ The Reference Margin Level can be determined using both deterministic and probabilistic (based on a 0.1/year loss of load study) approaches. In both cases, this metric is used by system planners to quantify the amount of reserve capacity in the system above the forecasted peak demand that is needed to ensure sufficient supply to meet peak loads. Establishing a Reference Margin Level is necessary to account for long-term factors of uncertainty involved in system planning, such as unexpected generator outages and extreme weather impacts that could lead to increase demand beyond what was projected in the 50/50 load forecasted. In many assessment areas, a Reference Margin Level is established by a state, provincial authority, ISO/ RTO, or other regulatory body. In some cases, the Reference Margin Level is a requirement. Reference Margin Levels can fluctuate over the duration of the assessment period or may be different for the summer and winter seasons.

⁸ This is the amount of anticipated resources less net internal demand calculated as a percentage of net internal demand.

⁹ This is the amount of prospective resources less net internal demand calculated as a percentage of net internal demand.

The most recent forecast of these reserve margins from the NERC 2020 LTRA published in December of 2020 is shown in Figure MF-5.¹⁰

**FIGURE MF-5
NWPP AND RMRG POWER SUPPLY ASSESSMENT**

| Demand, Resources, and Reserve Margins (MW) | | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Quantity | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| Total Internal Demand | 64,258 | 65,160 | 65,663 | 66,261 | 66,498 | 66,904 | 67,331 | 68,152 | 68,567 | 69,063 |
| Demand Response | 1,162 | 1,169 | 1,174 | 1,178 | 1,180 | 1,182 | 1,183 | 1,179 | 1,179 | 1,172 |
| Net Internal Demand | 63,096 | 63,992 | 64,490 | 65,083 | 65,319 | 65,723 | 66,148 | 66,974 | 67,389 | 67,892 |
| Additions: Tier 1 | 493 | 1,034 | 1,201 | 1,288 | 1,288 | 1,288 | 1,288 | 1,288 | 1,288 | 1,288 |
| Additions: Tier 2 | 0 | 115 | 434 | 437 | 437 | 437 | 437 | 437 | 434 | 434 |
| Additions: Tier 3 | 366 | 708 | 1,148 | 2,872 | 2,940 | 3,125 | 3,845 | 4,095 | 4,733 | 5,639 |
| Net Firm Capacity Transfers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing-Certain and Net Firm Transfers | 78,940 | 78,686 | 78,361 | 77,830 | 77,618 | 76,090 | 75,785 | 74,729 | 73,964 | 73,634 |
| Anticipated Reserve Margin (%) | 25.9% | 24.6% | 23.4% | 21.6% | 20.8% | 17.7% | 16.5% | 13.5% | 11.7% | 10.4% |
| Prospective Reserve Margin (%) | 25.9% | 24.8% | 24.0% | 22.2% | 21.5% | 18.4% | 17.2% | 14.2% | 12.3% | 11.0% |
| Reference Margin Level (%) | 15.4% | 16.1% | 15.2% | 15.1% | 15.0% | 14.9% | 14.8% | 15.6% | 14.7% | 14.5% |

WECC and all the individual sub-regions are assessed as *adequate* by NERC and are expected to have sufficient generation to meet or exceed the RML for the seasonal peak hours represented in the assessment period for this particular on-peak assessment. This is based on expected levels of demand and resource availability.

However, measures of energy adequacy from the probability assessment (ProbA), which accounts for all hours in selected study years of 2022 and 2024, are cause for concern. WECC's 2020 ProbA notes several hours that pose a potential risk for loss of load for almost all WI areas over studied years 2022 and 2024.¹¹

Nearly all parts of the WI, with the exception of Alberta, face heightened loss of load risk. The California assessment area could face periods where resources are insufficient for area energy needs, potentially resulting in up to 22 hours of load-loss in 2022. The recent experience during the wide-area heat wave in August 2020 provides evidence of the challenges faced in the WI to reliably serve the changing demand profile with the evolving resource mix. Driven in part by the recent western area heat wave event, which saw load shed over the summer, all areas are reviewing the level of resource adequacy considering forecast variability.

The 2020 ProbA indicates the greatest risk of load loss occurs in the summer months during the one to three hours after peak demand for the day. Reserve margins for the WECC-NWPP and RMRG area are over 24 percent for 2022 and 21 percent for 2024, but there are levels of LOL of one and five hours, respectively, due in part to the changing resource mix. EUE is calculated to be

¹⁰ https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2020.pdf

¹¹ The Energy Use Efficiency ("EUE") is the summation of the expected number of megawatt hours of demand that will not be served in a given time period as a result of demand exceeding the available capacity across all hours. EUE is an energy-centric metric that considers the magnitude and duration for all hours of the time period, calculated in megawatt hours (MWh).

about 13,000 in 2022 and 248,000 in 2024. The EUE occurs in the same months and hours as the LOL. The magnitudes range from less than a MW to 2,000 MW in one hour and as much as one to three hours per LOL period.¹²

As the probabilistic assessment reflects, when assessing the system with non-expected levels of demand and resource availability, maintaining reliability to a 1-day-in-10-year threshold of reliability for every hour is not achieved. The difference between the LTRA and the ProbA results is that the ProbA captures the expected equivalent forced outage rate for baseload resources whereas the LTRA does not. The other difference is that the ProbA looks at all hours of the year, and the LTRA looks at the peak hour only.

The traditional methods of assessing resource adequacy at peak load times may not accurately or fully reflect the ability of the new resource mix to supply energy and reserves for all hours. Energy limitations can exist, requiring probabilistic analysis methods to identify risks to reliability that result from shortfalls in the conversion of capacity to energy (energy adequacy). The new resource mix includes natural gas-fired generation, unprecedented proportions of nonsynchronous resources, including renewables and battery storage, demand response, smart and micro-grids and other emerging technologies. Collectively, the new resources are more susceptible to energy sufficiency uncertainty.

The Companies' BAA is included in the NWPP sub-region within the WECC. The BAA is integrated with the other sub-regions by way of transmission interconnections within the electric grid. The Companies routinely engage in purchase and sales transactions with neighboring utilities belonging to other WECC sub-regions and reserve margins in those sub-regions have the ability to impact operations in Nevada. Consequently, reserve margins in BAAs located in the other sub-regions can affect operations and capacity availability in the system as well. The addition of variable energy resources, primarily wind and solar, and the retirement of conventional generation is fundamentally changing how the bulk power systems ("BPS") are planned and operated.

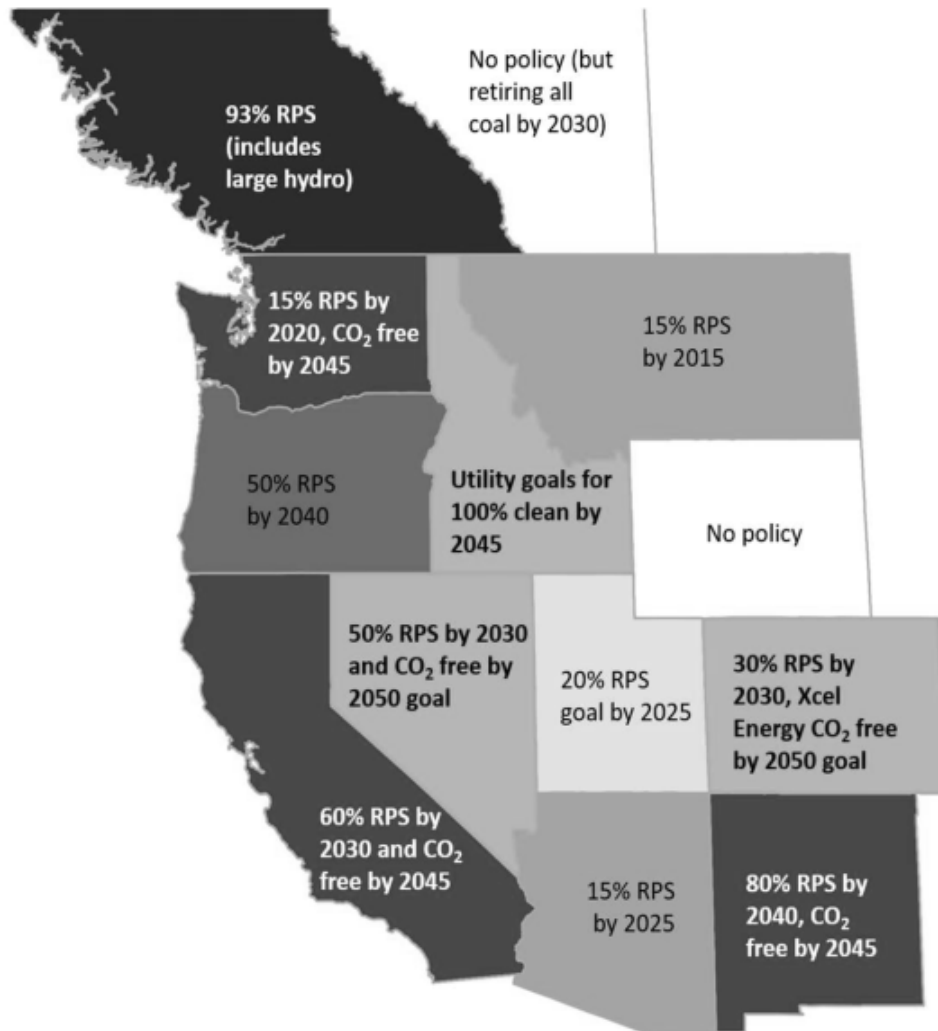
¹² https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2020 at p. 160.

3. FUTURE PRICE DRIVERS

The primary factors driving regional power prices during the ESP period will be federal and state mandates, energy demand, natural gas price levels and energy production from renewable energy resources.

Federal, Regional and State Mandates. The Biden Administration’s clean energy plans target net-zero carbon emissions in the power sector by 2035 and economy-wide by 2050. At present, it is unclear what policy and regulatory instruments will be used to achieve these goals. While anticipated federal regulation is pending, state policies demanding a shift to a cleaner electricity supply portfolio are already in place. Some state mandates in the WECC are illustrated in Figure MF-6 below.

**FIGURE MF-6
WECC RPS MANDATES**



Energy Demand. In the short term, demand for electricity may fluctuate as a result of year-to-year weather changes, but EIA projects that longer-term trends in electricity demand are driven by economic growth, and are somewhat offset by efficiency improvements. In the Annual Energy Outlook (“AEO”) 2021 Reference case, after electricity demand returns to 2019 levels (following the impacts of COVID-19) in 2022, the average annual growth rate surpasses 1 percent only toward the end of the projection period. EIA projects electricity demand in the AEO 2021 High Economic Growth case to grow at about one-quarter of a percentage point faster than in the Reference case, and it projects electricity demand in the Low Economic Growth case to grow at about one-quarter of a percentage point slower than in the Reference case.

The growth in electricity sales is lessened by significant growth in onsite generation in the residential, commercial, and industrial sectors. Installation of rooftop solar PV systems, primarily on residential and commercial buildings, and combined-heat-and-power systems in industrial and some commercial applications, will account for more than seven percent of total electricity generation by 2050, almost doubling the 2020 share of onsite power generators.¹³

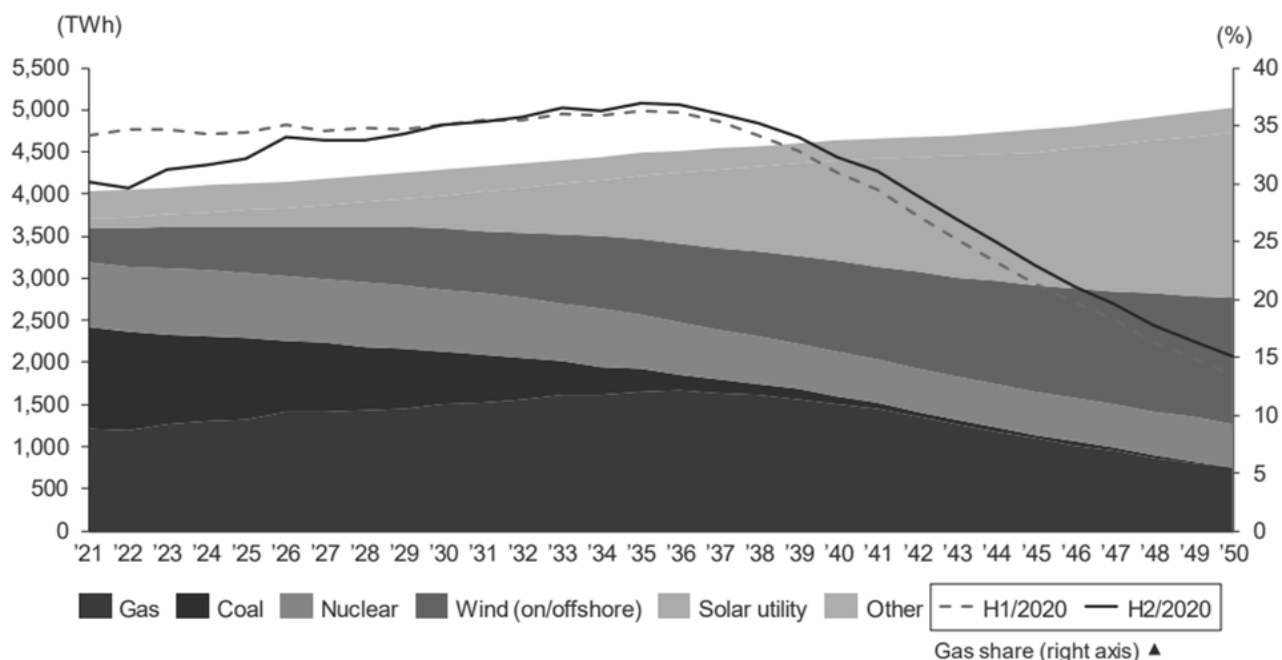
Natural Gas Price Level. Wood Mackenzie (“WoodMac”) in its 2020 H2 Outlook forecasts natural gas prices to average ██████ per MMBtu over this decade. As economic growth resumes in the wake of the pandemic, rising global gas demand is expected to keep North American liquefied natural gas (“LNG”) facilities running close to full-on seasonally adjusted capacity levels in the near- to medium-term even as additional trains come online.

The longer-term forecast, which averages ██████ per MMBtu in the 2030s and ██████ per MMBtu in the 2040s, is driven by a mix of demand and supply dynamics. U.S. gas demand is expected to reach its peak in the 2030s, mainly due to higher renewable penetration and the significant phaseout of coal generation that will put gas plants at the center of decarbonization. Electrification of the heating sector, a regionalized movement today in California and the Northeast, is also expected to have a more material impact, particularly around the winter season. As peak demand begins to alter due to technology substitution, regional basis will feel its impact as well. Despite the falling domestic demand, Henry Hub stabilizes around ██████/MMBtu in the 2040s due to rising LNG exports and resource exhaustion in the low-cost plays. WoodMac forecasts global demand for natural gas will continue to grow over the entire forecast horizon.¹⁴ Figure MF-7 illustrates WoodMac’s forecast of North American generation balances, 2021 to 2050.

¹³ U.S. EIA, “AEO 2021.”

¹⁴ Wood Mackenzie, H2 Outlook 2020, North America power markets long term outlook (February 2021)

FIGURE MF-7
FORECAST NORTH AMERICAN GENERATION BALANCES, 2021 TO 2050



Source: Wood Mackenzie

Renewable Energy Resources. As the share of natural gas-fired generation remains relatively flat, and as the contribution from coal and nuclear fleets drops by half, the renewables' share of the electricity generation mix more than doubles from 2020 to 2050. Wind is responsible for most of the growth in renewables generation from 2020 through 2024, accounting for more than two-thirds of those increases in renewables generation during that period. After the production tax credit for wind phases out at the end of 2024, solar generation is responsible for almost three-quarters of the increase in renewables generation. EIA assumes solar receives a 30 percent investment tax credit through 2023, which is then reduced to a permanent value of 10 percent in 2024 and forward.¹⁵

Battery costs are starting to change the way utilities think about how they generate electricity. Prices that were above \$1,100/kWh in 2010, have fallen 89 percent in real terms to \$135/kWh in 2020. By 2023, average prices will be close to \$100/kWh, according to the latest forecast from research company BloombergNEF. It is at around this price point that automakers are expected to be able to produce and sell mass market electric vehicles at the same price (and with the same margin) as comparable internal combustion vehicles. Cost reductions in 2020 are due to increasing order size, growth in battery electric vehicle sales and the continued penetration of high energy density cathodes. The introduction of new pack designs and falling manufacturing costs will continue to drive prices down in the near term.¹⁶

¹⁵ U.S EIA, "AEO 2021."

¹⁶ Bloomberg December 16, 2020, <https://about.bnef.com/blog/battery-pack-prices-cited-below-100-kwh-for-the-first-time-in-2020-while-market-average-sits-at-137-kwh/=1>

B. NATURAL GAS FUNDAMENTALS

This section discusses some of the key market fundamentals that can affect the availability and price of natural gas to the Companies and their customers. These fundamentals include: demand, supply, transportation, and price trends of natural gas. As North American power markets continue to transition to cleaner energy sources (*e.g.*, natural gas and renewables), natural gas will be the driving determinant of market power prices as well. Natural gas is widely considered to be a critical energy source for the future, with fossil fuels remaining the dominant source of energy powering the world economy. In particular, the abundance of natural gas, coupled with its relative environmental attributes and multiple applications across all sectors, means that it will continue to play an important role in meeting demand for energy in the United States.

Market fundamentals indicate the availability and reliability of physical gas supplies to be adequate for satisfying natural gas demand for the foreseeable future. Prices for gas will fluctuate depending upon demand (often weather-related), economics of drilling, and finally federal and state decarbonization efforts.

1. DEMAND

The energy demand in short-term remains subject to heightened levels of uncertainty because mitigation and reopening efforts related to COVID-19 continue to evolve. Reduced economic activity related to the COVID-19 pandemic caused changes in energy supply and demand patterns in 2020 and 2021. Demand for natural gas, as well as other types of energy, is expected to increase over the long-term driven by end-use consumption and opportunities to sell natural gas through LNG exports for international consumption. Large amounts of natural gas are consumed in the United States for various uses, for example space heating in buildings, thermal and feedstock requirements in industrial processes, and natural gas-fired electricity generation that is subsequently delivered as purchased electricity. Natural gas consumption growth between 2020 and 2050 is concentrated in two areas: exports and industrial use. All sectors in the United States are projected to increase natural gas consumption in 2050 relative to 2020 except the residential sector.¹⁷

On a short-term basis, demand for natural gas has traditionally been seasonal. As a general matter, demand is highest during the winter, the primary driver being residential and commercial heating. Natural gas in storage typically declines in the winter as it is consumed during peak usage, then is injected back into storage in the spring and summer months in order to rebuild storage levels for the next winter's drawdown. Besides weather, the general state of the U.S. economy can have a considerable effect on the demand for natural gas in the short term, particularly for industrial consumers. When the economy is expanding, output from industrial sectors generally increases at a similar rate. When the economy is in recession, output from industrial sectors drops.

As a result of faster growing natural gas-fired generating capacity than natural gas-fired generation from 2020 to 2050, capacity factors for natural gas units decline steadily across all plant technology types. As more renewable capacity is added that displaces generation from both existing and new natural gas fired generators, capacity factors for existing combined-cycle units will drop by nearly half from a peak of 60 percent in 2020. Natural gas accounts for more than 40 percent of cumulative capacity additions from 2020 to 2050. About half of these additions are low-utilization combustion turbines, which are economically attractive when mostly used to provide infrequent peaking capacity. Energy storage systems, such as stand-alone batteries or solar/battery hybrid systems, are used as an arbitrage tool to move solar and other generation from periods of high supply and low demand to periods of low supply and high demand.¹⁸

The United States has become a major player in the LNG export industry, with further increases in pipeline exports to Mexico, and reduction of domestic demand from Canadian gas. Natural gas is also viewed as a “cleaner” burning fuel source, without the emission issues inherent with coal-fired generation. The abundance of natural gas, coupled with its environmental advantage relative to coal-fired generation, and multiple applications across all sectors, means that natural gas will continue to play an increasingly important role in meeting demand for energy in the United States.

¹⁷ U.S. EIA, “AEO 2021.”

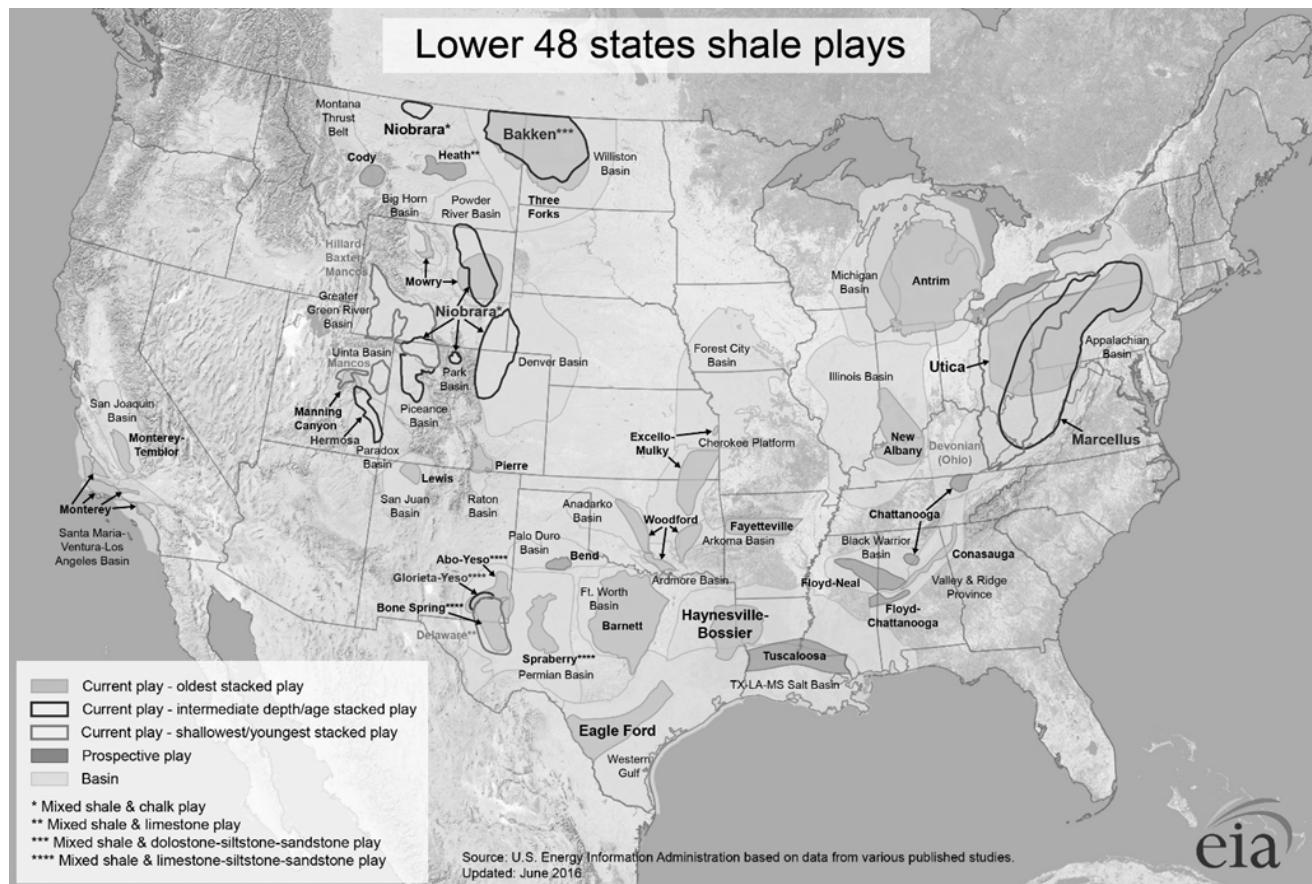
¹⁸ *Id.*

2. SUPPLY

The Companies currently purchase most of the natural gas supply burned in their power plants from the Western Canadian Sedimentary Basin in Alberta and British Columbia, Canada. The Companies also access natural gas supplies from the Rockies region, principally the states of Wyoming, Colorado, and Utah.

Reserves. U.S. natural gas reserves have significantly increased due primarily to advances in drilling technology, which have allowed recovery of shale gas from large plays concentrated mainly in the eastern and Gulf Coast states. Shale natural gas, a type of unconventional natural gas, is formed where a shale formation is both the source rock and the producing reservoir. Currently, the seven plays with the greatest reserves in the United States include: Marcellus, Barnett (the play that started the U.S. shale boom), Eagle Ford, Haynesville/Bossier, Woodford, Fayetteville and Utica. Supplemental domestic production continuing in the Rockies, San Juan and Permian Basins should ensure natural gas is available to supply power plants in order to meet electric load requirements through a planning horizon. Figure MF-8 shows the locations of those and other shale gas plays.

**FIGURE MF-8
U.S. SHALE GAS PLAYS AND FORMATIONS**



The rapid growth of shale gas production in the United States validates the extreme importance of this fuel resource. Increased production from shale gas has prompted both lower natural gas prices and a declining dependence on imported natural gas. However, shale gas drilling has also raised localized environmental concerns regarding the potential adverse affects on water quality. With the continued significant price disparity between natural gas and crude oil, the majority of drilling continues to focus on natural gas liquids, with dry natural gas as an “associated” commodity.

Production. EIA forecasts that U.S. production of dry natural gas will average 91.4 Bcf/d in 2021, which is about the same as the 2020 average. In the forecast, dry natural gas production falls to a low point of 90.8 Bcf/d in May 2021 before steadily increasing through most of the remainder of 2021, reaching a high of 92.4 Bcf/d in November 2021. The increase in production in 2021 reflects higher forecast natural gas prices as well as higher forecast crude oil prices, which we expect will contribute to more associated natural gas production, especially in the Permian region.¹⁹

In previous years (prior to the shale gas boom), conventional natural gas production grew in the western U.S. region, primarily in the Rockies. However, western U.S. production has become flat as increased production takes place from shale plays. The Permian basin in west Texas and eastern New Mexico has been a bright spot with the strong growth in associated gas because of its attractive economics, consequently, longer-term production growth in the Permian looks promising, with new export capacity to Mexico being an attractive market.

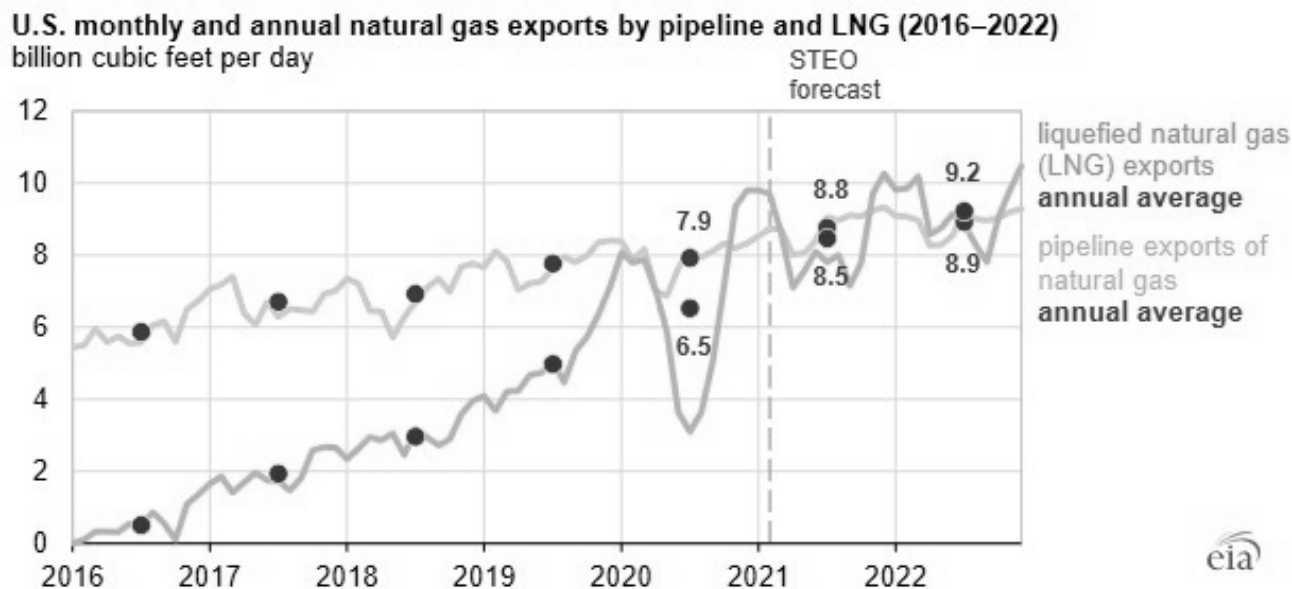
Trade. Canada is the world’s fifth largest producer of natural gas and has abundant reserves of both oil and gas. Canada’s National Energy Board published a report indicating natural gas production and consumption will increase through the next decade, but that LNG exports will be the primary driver of growth for Canada’s gas production. With declining exports to the United States, new sources of demand must be found for Canadian natural gas production and LNG exports are key to maintaining Canada’s overall exports. U.S. net natural gas pipeline imports from Canada decreased from 2019 to 2020, continuing a trend that began in 2008. This decrease in net imports is expected to continue as Appalachian production growth displaces some imports of Canadian natural gas to U.S. Midwest markets. About 61 percent of the total U.S. natural gas exports in 2019 were by pipeline, of which 66 percent went to Mexico and 34 percent went to Canada. Exports of LNG increased substantially each year from 2015 through 2020, coinciding with large increases in export capacity.²⁰

Since 2016, Mexico has been expanding its natural gas pipeline system, which has supported continual growth in U.S. natural gas exports. Most of this growth has been in U.S. natural gas exports from southern Texas after the existing U.S. pipeline infrastructure was expanded and the Los Ramones Phase II pipeline in central Mexico was complete. Exports of natural gas to Mexico by pipeline are the largest component of U.S. natural gas trade, accounting for 40 percent of all U.S. gross natural gas exports in 2019. Figure MF-9 illustrates the natural gas export growth, both in pipeline and in LNG.

¹⁹ U.S. EIA, “Short-term Energy Outlook” (April 2021).

²⁰ U.S. EIA, [Natural gas imports and exports - U.S. Energy Information Administration \(EIA\)](#)

**FIGURE MF-9
U.S. NATURAL GAS EXPORT**



According to the EIA February 2021 Short-Term Energy Outlook STEO, EIA forecasts that U.S. LNG exports will exceed natural gas exports by pipeline in the first and fourth quarters of 2021 and on an annual basis in 2022. Monthly U.S. LNG exports exceeded natural gas exports by pipeline by nearly 1.2 billion cubic feet per day (Bcf/d) in November 2020, according to EIA’s Natural Gas Monthly. LNG exports have only exceeded natural gas exports by pipeline once since 1998—in April 2020—by 0.01 Bcf/d.

U.S. LNG exports set consecutive monthly records of 9.4 Bcf/d in November and of 9.8 Bcf/d in both December 2020 and January 2021, according to EIA’s estimates based on the shipping data provided by Bloomberg Finance, L.P. EIA forecasts that U.S. LNG gross exports will average 9.7 Bcf/d in February 2021 before declining to seasonal lows in the shoulder months of the spring and fall seasons. EIA forecasts LNG exports to average 8.5 Bcf/d in 2021 and 9.2 Bcf/d in 2022, compared with average gross pipeline exports of 8.8 Bcf/d in 2021 and 8.9 Bcf/d in 2022.

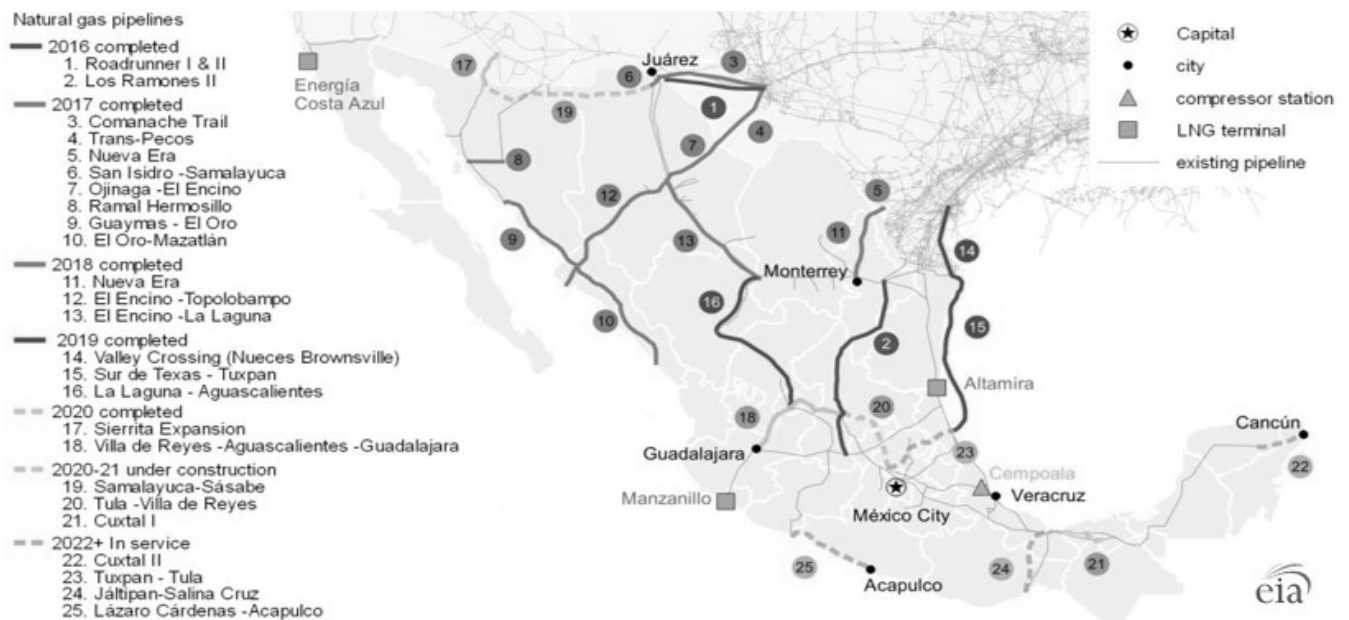
Since November 2020, all six U.S. LNG export facilities have been operating near full design capacity. In December, the Corpus Christi LNG facility in Texas commissioned its third and final liquefaction unit six months ahead of schedule, bringing the total U.S. liquefaction capacity to 9.5 Bcf/d baseload (10.8 Bcf/d peak) across six export terminals. The November to January increase in U.S. LNG exports has been driven by rising international natural gas and LNG prices, particularly in Asia, and lower global LNG supply because of unplanned outages at several LNG export facilities worldwide.²¹ U.S. pipeline exports to Mexico increased by 6.4 percent in the first eleven months of 2020 compared with the same period in 2019 as a result of the completion of a new segment of the Wahalajara pipeline system in June and the Cempoala compressor station in

²¹U.S. EIA, Annual U.S. liquefied natural gas exports forecast to exceed pipeline exports in 2022 - Today in Energy - U.S. EIA.

September. The completion of Mexico's Samalayuca-Sásabe pipeline (0.47 Bcf/d capacity) in January 2021 and the expected completion of Tula-Villa de Reyes pipeline (0.89 Bcf/d capacity) later this year are expected to further increase U.S. pipeline exports to Mexico.²²

In the long term, because of expected increases in international demand for natural gas, EIA expects U.S. LNG exports to more than double between 2020 and 2029 in the Reference case.²³ Exports to Mexico are expected to continue increasing as the deregulation of Mexico's energy market has made it easier to develop pipeline projects. Figure MF-10 illustrates U.S. – Mexico border-crossing pipelines and expansion of Mexico's domestic pipeline networks.

FIGURE MF-10
U.S. - MEXICO NATURAL GAS PIPELINES



²² U.S. EIA, U.S. natural gas exports to Mexico set to rise with completion of the Wahalajara system - Today in Energy – U.S. EIA.

²³ U.S. EIA, "AEO 2021."

3. TRANSPORT AND STORAGE

Natural gas pipeline infrastructure. Technological advancements in horizontal drilling and hydraulic fracturing have enabled the economic extraction of natural gas from shale formations, fundamentally transforming the natural gas industry in the United States. As a result of this transformation, which has prompted lower natural gas prices, demand is expected to continue to increase from multiple end-use sectors. Since the electric power sector uses almost one-third of the natural gas consumed in the United States, adequate pipeline infrastructure is critical in moving this gas to electric generators and maintaining reliability in many regions.

The United States has more than 210 natural gas pipeline systems with 305,000 miles of pipelines to deliver natural gas from producing regions to end users. Natural gas pipeline infrastructure also includes:

- More than 1,400 compressor stations that maintain pressure on the natural gas pipeline network and assure continuous forward movement of supplies;
- More than 11,000 delivery points, 5,000 receipt points, and 1,400 interconnection points that provide for the transfer of natural gas throughout the United States;
- 24 hubs or market centers that provide additional interconnections;
- 400 underground natural gas storage facilities;
- 49 locations where natural gas can be imported/exported via pipelines; and
- Eight LNG import facilities and 100 LNG peaking facilities.²⁴

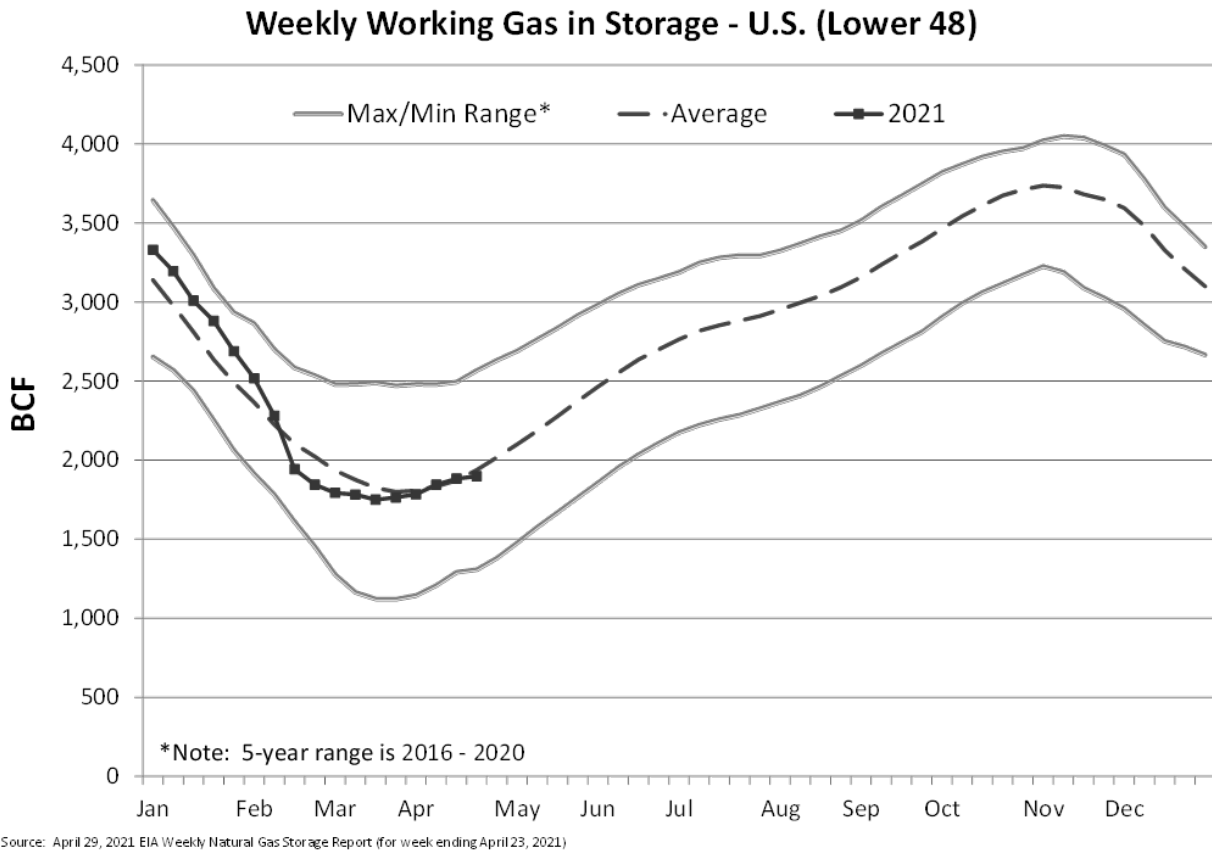
Storage. Natural gas can be stored in underground facilities to be consumed at a later date. Storage is primarily used to meet seasonal load variations, but also can be used as backup for events affecting production or delivery of natural gas (e.g., hurricanes, disruption of production/distribution systems, etc.). Natural gas is injected into storage during periods of low demand and withdrawn during periods of peak demand. Rarely is storage utilized to reduce price volatility. Generally speaking, market participants watch the change in natural gas inventories to gauge supply and demand dynamics, with large inventory builds representing weak demand/strong supply and large inventory draws representing strong demand/weak supply.

EIA forecasts that natural gas inventories ended March 2021 at nearly 1.8 Tcf, which is 2 percent lower than the five-year (2016–2020) average. The winter of 2020–2021 had more natural gas withdrawn from storage than the five-year average largely as a result of the cold February temperatures that occurred amid low natural gas production. EIA expects that rising natural gas production and lower natural gas consumption for power generation than in the past two summers will contribute to storage injections outpacing the five-year average in 2021. EIA estimates that natural gas inventories will end the 2021 injection season (end of October) at more than 3.7 Tcf, which is equal to the five-year average.²⁵ Working gas storage levels for the United States in 2016–2020 and so far in 2021 are shown in Figure MF-11.

²⁴ EIA, “About U.S. Natural Gas Pipelines.”

²⁵ U.S. EIA, “Short-term Outlook” (April 2021).

FIGURE MF-11



Movement in natural gas prices can be partly attributable to natural gas storage levels. Relative shortages or excesses of storage capacity during heavy load periods (typically November through March) can either create or hinder the daily volatility of natural gas prices. The consuming West region has the smallest share of gas storage, both in terms of the number of sites, as well as gas capacity/deliverability.

Arizona, Idaho and Nevada do not have any underground storage sites within their borders. Approximately 63 percent of total capacity in the West is located in California and Montana. Moreover, the bulk of the region's working gas capacity is located in California's 14 underground natural gas storage sites, seven of which are owned by the two principal gas distributors in the State: Southern California Edison ("SoCal") and Pacific Gas & Electric ("PG&E"). Most of their storage capacity is used for system balancing and as a way of maintaining a steady and high utilization of contracted pipeline capacity from Canada, the Rocky Mountains, and the Southwest.

The five independent storage facilities in California (not owned by either SoCal or PG&E) are used primarily as depositories for gas produced within the State that is not immediately marketable. In addition, these sites are connected to (and deliver their withdrawals to) the SoCal and/or PG&E systems.

Although the Aliso Canyon Natural Gas Storage Facility has returned to operations in Southern California, there is still concern with the reduced availability of the facility. WECC continues to monitor this in conjunction with the CAISO and SoCal gas to assess the potential impacts to reliability for the WL.

Storage facilities in Washington and Oregon are used primarily to provide seasonal backup to several local distribution companies located in the Northwest, and are crucial in maintaining their operational flexibility and system integrity. These storage facilities are also used by some Canadian shippers/customers to support their marketing and operational needs. The import/export facilities of the Northwest Pipeline Company at Sumas, Washington, are used to move natural gas in either direction to storage, depending on marketing conditions.

C. COAL FUNDAMENTALS

The U.S. coal industry has seen a temporary rebound due to increased domestic electricity generation. Forecasted coal production for 2021 and 2022 are both expected to exceed 2020 levels, however, the direction of future markets and the ultimate structure of coal industry remain unclear as coal producers face many significant and diverse forces. Among the major challenges and uncertainties are ongoing retirements of coal-fired generating capacity, declining coal-fired power plant utilization, sustained low natural gas prices, rapid growth of renewable energy, environmental policies and regulation, increasing reliance on coal export markets, and industry consolidation and contraction. Despite the short-term increase in coal production, producers nationwide still face financial and operational performance challenges with numerous coal mine closures forecasted in the coming years.²⁶

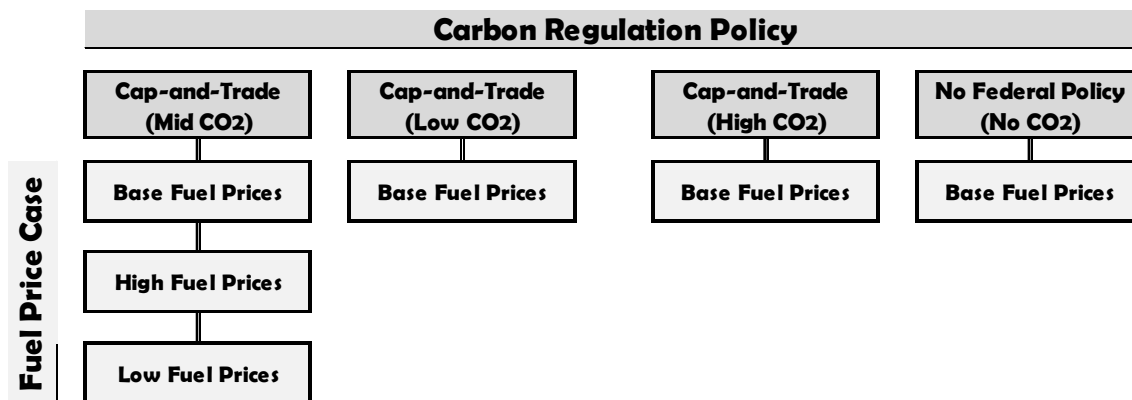
North Valmy Station's recent coal supply area is spread between Utah and Colorado within the Uinta Basin. The Companies do not anticipate utilizing North Valmy Station after 2024 with the plant closure being planned for 2025.

²⁶ U.S EIA, "Short-term Outlook" (April 2021).

SECTION 3. FUEL AND PURCHASED POWER PRICE FORECASTS

Forecasts of fuel and purchased power prices are essential inputs to an IRP analysis. Robust production cost analysis conducted using PROMOD tests the sensitivity of results against different fuel and purchased price assumptions. The Companies have developed sensitivity studies around low, base and high fuel prices, together with low, base and high purchased power prices, including and excluding the impacts of carbon regulation. A total of six separate price forecast scenarios were developed to determine the impacts of both carbon regulation policy and fuel price levels on production costs and resource options. Three price forecast scenarios—base, high and low fuel prices—were prepared. These forecast scenarios were used in preparing the analysis presented in this IRP. Also, three alternative cases were prepared assuming base fuel prices but imposing various levels of carbon pricing (low CO₂, mid CO₂ and high CO₂). All six cases are shown in Figure PF-1.

**FIGURE PF-1
PRICE FORECAST SENSITIVITY SCENARIOS**



The methodology used to prepare the base case forecasts for power and natural gas prices relies upon observable market quotes in the near-term forecast years, which are gradually blended into long-term price forecasts obtained from an external consulting firm specializing in market fundamentals and fundamental price forecasting. The price forecast curves for power, natural gas, and coal are important to the economic evaluation of alternative electric resource plans. For example, higher natural gas prices, which are a variable expense in operating fossil fuel-fired plants, can increase the attractiveness of renewable energy options, which have no variable operating fuel expense but potentially higher up-front plant investment costs to construct on a dollars per kW basis.

Market quotes used for short-term forecast. Market quotes consist of observed trades in the relevant trading hubs: for natural gas, the Henry Hub, Alberta NOVA Inventory Transfer (“AB-NIT” or “AECO”), Sumas, Northwest Pipeline Rockies (“Rockies”), Malin, San Juan, Northwest Pipeline Rockies (“Rockies”); and for power, the Mid-Columbia (“Mid-C”) hub and the Mead trading hub. The source of market quotes is Argus Media (“Argus”) for natural gas prices and for

western regional power prices. The market quotes for the IRP forecast were prepared as an average of settlement prices for a 19-day trading period from February 1, 2021 through February 28, 2021.

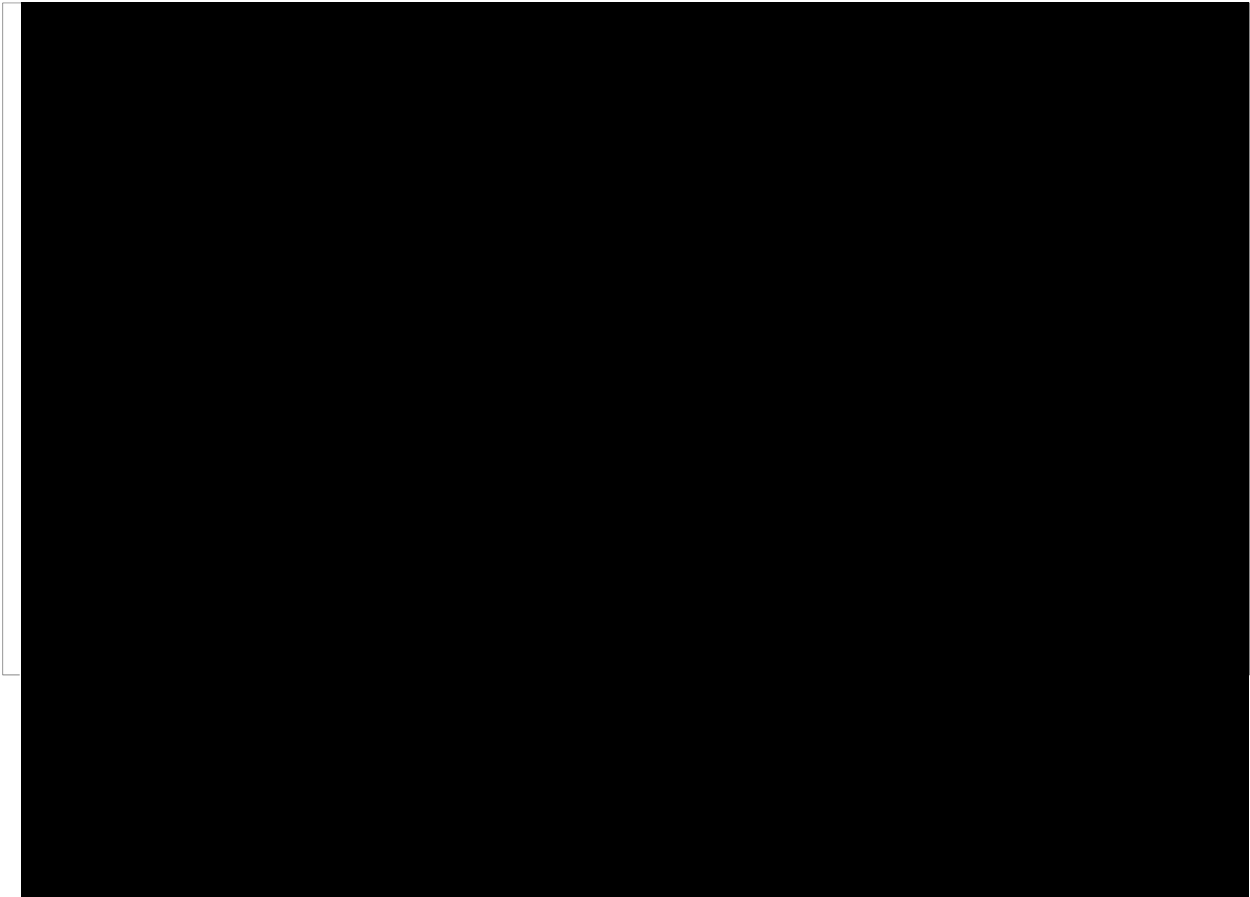
Fundamental (long-term) forecast. The fundamental forecasts of power and natural gas prices are provided through a subscription service with Wood Mackenzie, Ltd. (“WoodMac”), a global energy, metals and mining and consultancy service. WoodMac maintains an international reputation for supplying comprehensive data, written analysis and consultancy advice. The Companies perform detailed fundamental modeling of regional electric and natural gas systems, taking into account structural supply-demand price dynamics. For internal consistency, WoodMac’s projections of natural gas and power prices are taken from a single integrated forecast, the H2 2020 No Carbon case, released March 8, 2021.

A. BASE GAS PRICE FORECAST

The monthly gas price forecast by regional hub begins with the 19-day average of market quotes in the near-term forecast months, March 2021 through October 2023. For the intermediate-term months, November 2023 through October 2025, a blending process is used to gradually transition from the 19-day average quotes to the long-term fundamental natural gas price forecast from WoodMac.¹ The long-term fundamental forecast is used exclusively from November 2025 through December 2051. The base fuel-Mid CO₂ annual natural gas price forecast for the Rockies, Malin, AECO and SoCal hubs is shown in Figure PF-2.

¹ Blending of market quotes and the fundamental forecast occurs across four gas seasons, or 24 months (November 2023 through October 2025), with a weighting of the fundamental forecast increasing by 4 percent per month.

**FIGURE PF-2
ANNUAL AVERAGE GAS PRICE FORECAST
(BASE FUEL-MID CO₂)**



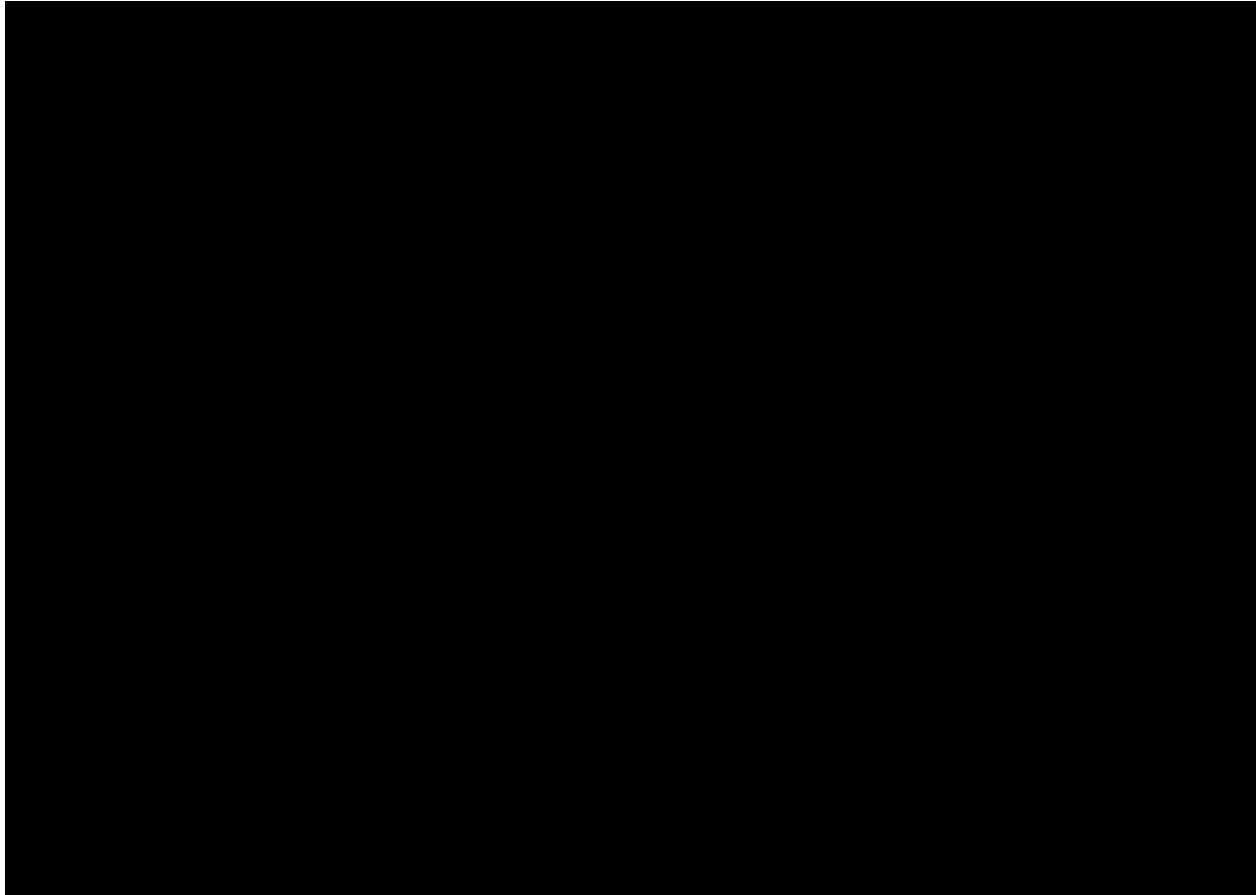
The associated monthly prices and additional trading hubs are provided in Technical Appendix FPP-1.

B. BASE MARKET IMPLIED HEAT RATE FORECAST

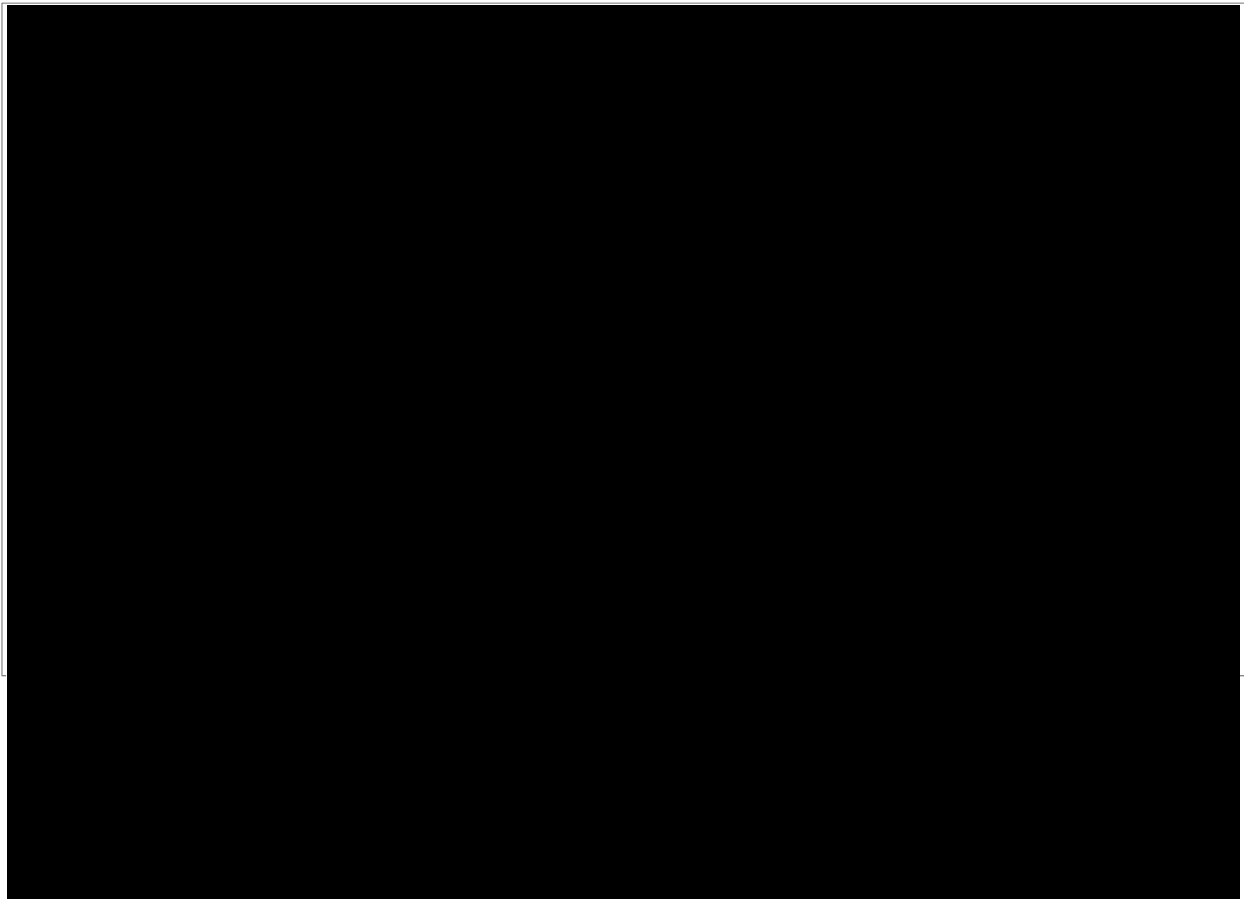
The economic evaluation of generation alternatives in this IRP is based on a production cost software model that dispatches the Companies' portfolio of generation and contracted resources (subject to unit operating constraints) against an economic opportunity to purchase power in the regional market at wholesale market prices. An essential input to this analysis is the wholesale power price forecast, which is prepared by multiplying the gas price forecast described above and a forecast of market implied heat rates ("MIHR") at nearby trading hubs for both on-peak and off-peak periods. The multiplication of monthly gas prices (in dollars per MMBtu) with monthly on-peak and off-peak market heat rates (in MMBtu per MWh) yields a monthly forecast of on-peak and off-peak power prices (in dollars per MWh).

Consistent with the approach used in prior IRPs and IRP amendments, the first part of the MIHR curve, through October 2023, is derived using the ratio of the 19-day average power price quotes and the 19-day average forward gas prices. The second part of the curve, from November 2023 to October 2025, reflects a blend of heat rates based on market quotes and heat rates based on the fundamental forecast. In the blending process, pure quotes receive more weighting in the initial months of the forecast blending period, while the fundamental-based heat rates receive more weighting towards the end of the 24-month blending period. The third part of the curve, from November 2025 through December 2051, is derived entirely from the fundamental-based curve from WoodMac. Figure PF-3 and Figure PF-4 provide the base case forecast (Base Fuel-Mid CO₂) of average MIHRs for delivered energy to southern and northern Nevada; these MIHRs are also provided on a monthly basis in Technical Appendix FPP-1.

FIGURE PF-3
AVERAGE MARKET IMPLIED HEAT RATE FORECAST – SOUTHERN NEVADA
(BASE FUEL-MID CO₂)



**FIGURE PF-4
AVERAGE MARKET IMPLIED HEAT RATE FORECAST – NORTHERN NEVADA
(BASE FUEL-MID CO₂)**

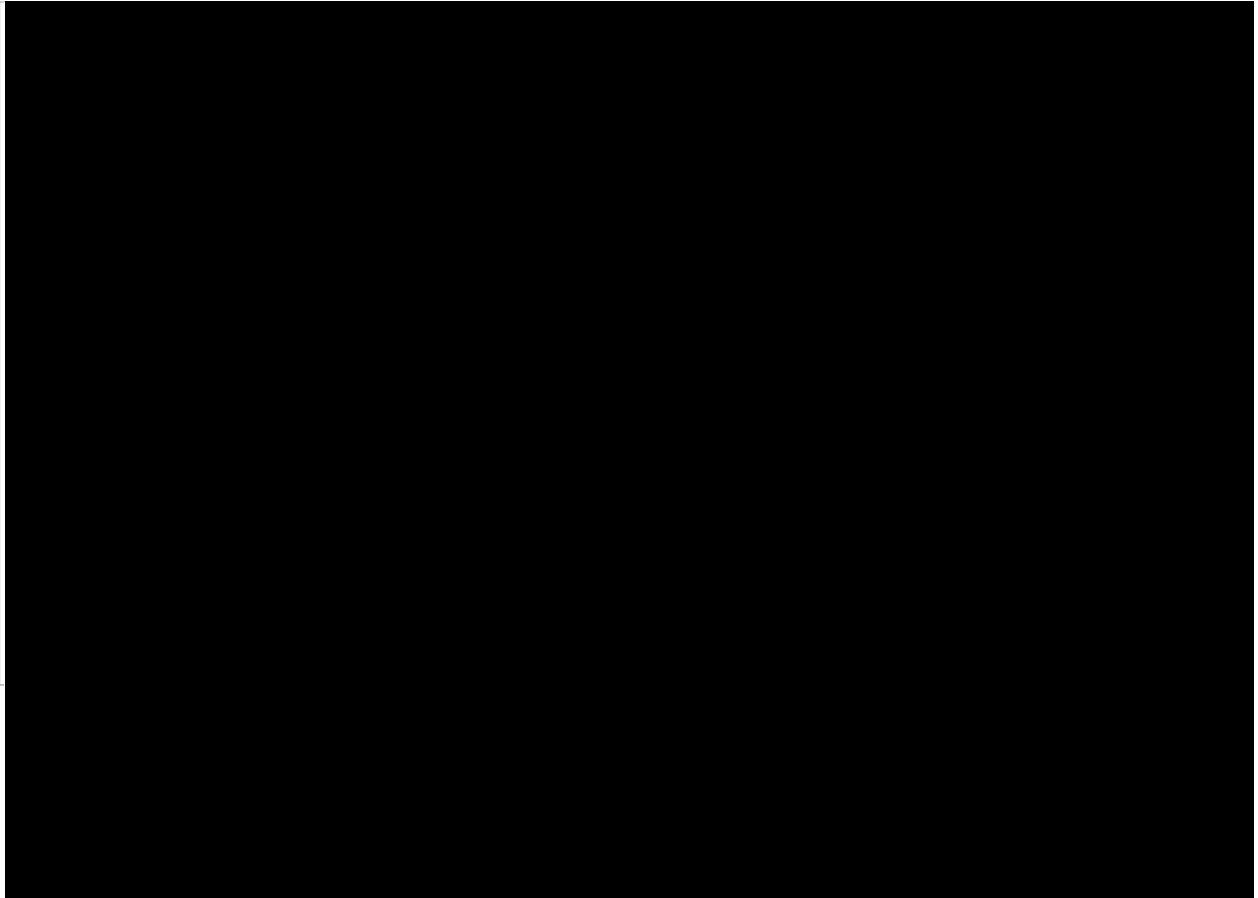


C. BASE POWER PRICE FORECAST

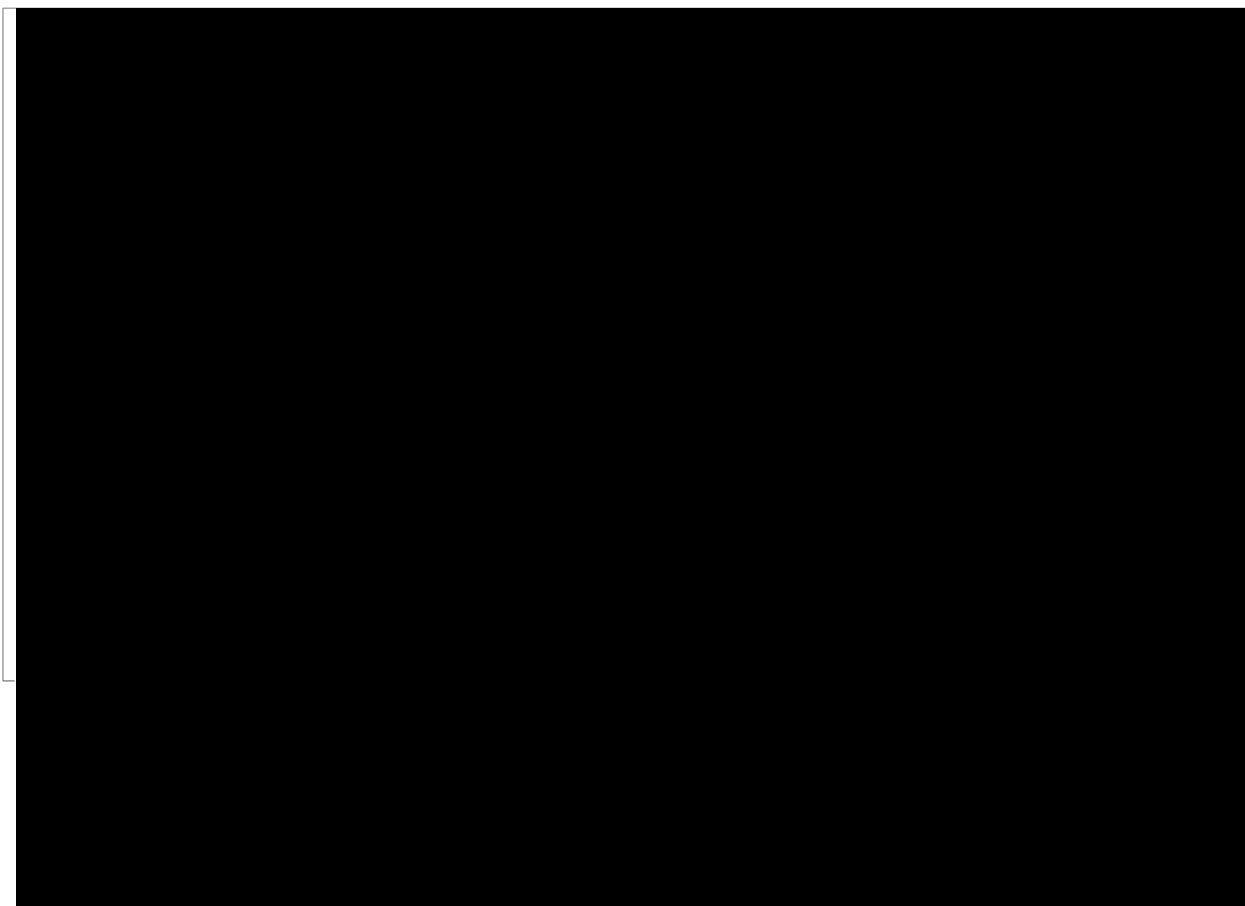
Once the forecast of MIHR is prepared, the hub power prices can be computed as the product of the MIHR (on-peak and off-peak periods) and the corresponding hub gas prices. For example, the Mid-C power price forecast was derived by multiplying the natural gas price forecast at Sumas by the forecast of MIHR at Mid-C and the Mead power price forecast was derived by multiplying the natural gas price forecast at SoCal by the forecast of MIHR at Mead.

The forecast of monthly power prices averaged annually for Mead are presented in the Figure PF-5. The forecast of monthly power prices averaged annually for northern Nevada are presented in the Figure PF-6.

FIGURE PF-5
AVERAGE ANNUAL POWER PRICE FORECAST – MEAD
(BASE FUEL-MID CO₂)



**FIGURE PF-6
AVERAGE ANNUAL POWER PRICE FORECAST – NORTHERN NEVADA
(BASE FUEL-MID CO₂)**



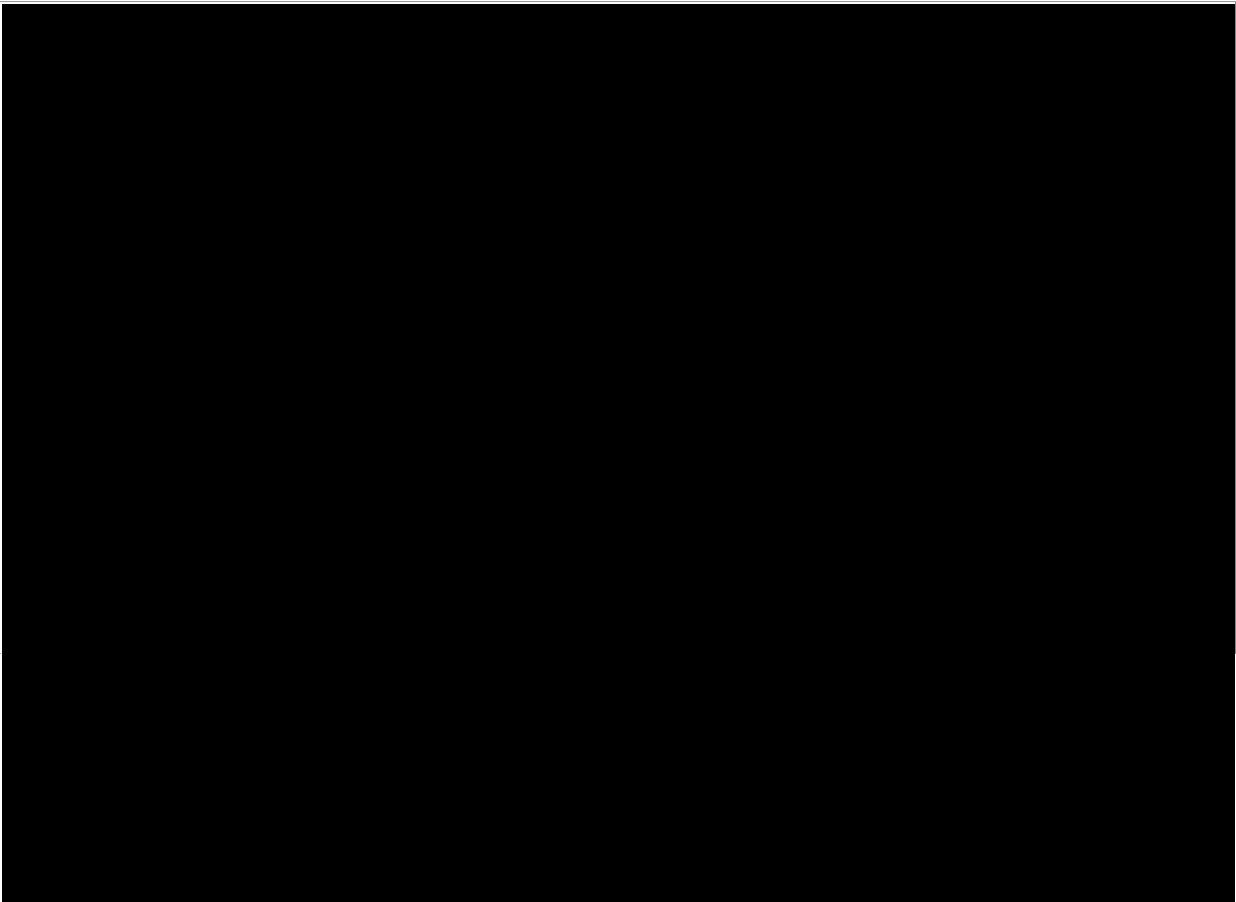
The monthly on-peak and off-peak prices for the various carbon cases are included in Technical Appendix FPP-1, respectively.

D. HIGH AND LOW GAS PRICE FORECASTS

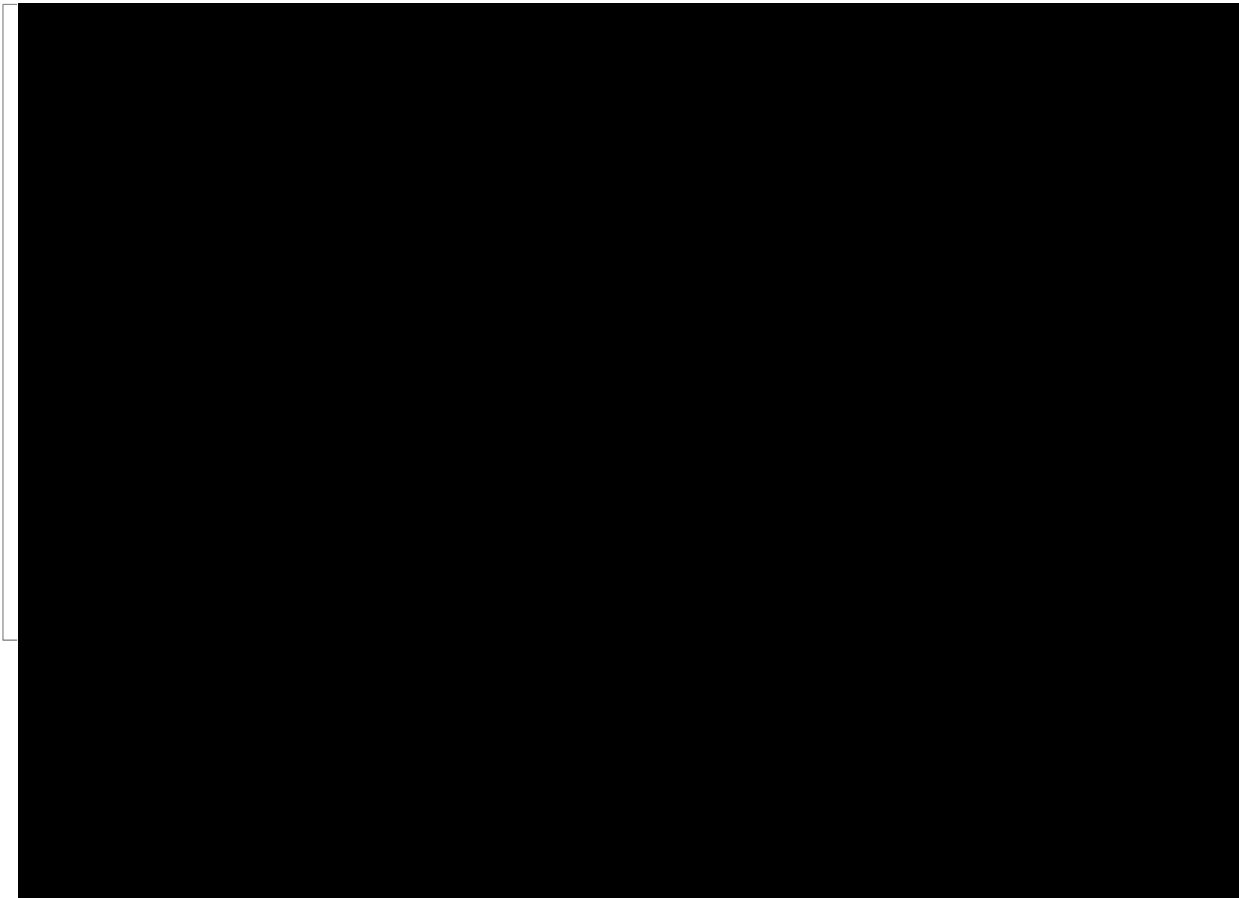
High and low gas prices. The Companies also prepared high and low sensitivities around the base case market price forecasts. An assumption of plus-and-minus one standard deviation around the base gas price forecast was computed for the high and low cases. Market quotes of implied volatilities from at-the-money call options from February 2021 were used to calculate the volatility of natural gas futures for the period from March 2021 to February 2024. Henry Hub volatility of 24 percent was then used from March 2025 for remainder of the forecast period. These volatilities were used to calculate the high and low natural gas prices.

The base, high and low-price projections for SoCal natural gas and Malin natural gas that result from applying the volatility curve are illustrated in Figures PF-7 and PF-8.

FIGURE PF-7
BASE, HIGH AND LOW GAS PRICE FORECAST – SOCAL



**FIGURE PF-8
BASE, HIGH AND LOW GAS PRICE FORECAST – MALIN**



E. HIGH AND LOW POWER PRICES

Once the high and low gas price trajectories are computed, the Companies adjust the base case power price forecasts for Mead and northern Nevada delivered power. For on-peak and off-peak periods, the high and low power prices are calculated by first multiplying the high and low gas prices with a heat rate of 7,000 Btu/kWh. The product of this calculation is added to the monthly spark spreads from the base case price forecast.² This methodology provides a reasonable estimate for market prices where natural gas-fired generation is setting market clearing prices, such as in Nevada.

² Note that the high and low power price forecast cases incorporate market variability around fuel prices only (*i.e.*, these sensitivity forecasts hold constant the spark spread embedded in the base case forecast). The spark spread is the difference between the price received by a generator for electricity produced and the cost of the natural gas used to produce that electricity; it is also an estimation of the value of energy in wholesale markets, reflective of the comparative balance between power supplies and electricity demand.

The average annual base, high and low on-peak power prices for southern Nevada (Mead trading hub) are graphed in Figure PF-9. The average annual base, high and low on-peak power prices for northern Nevada are graphed in Figure PF-10.

FIGURE PF-9
BASE, HIGH, LOW POWER PRICE FORECAST - MEAD (ON-PEAK)

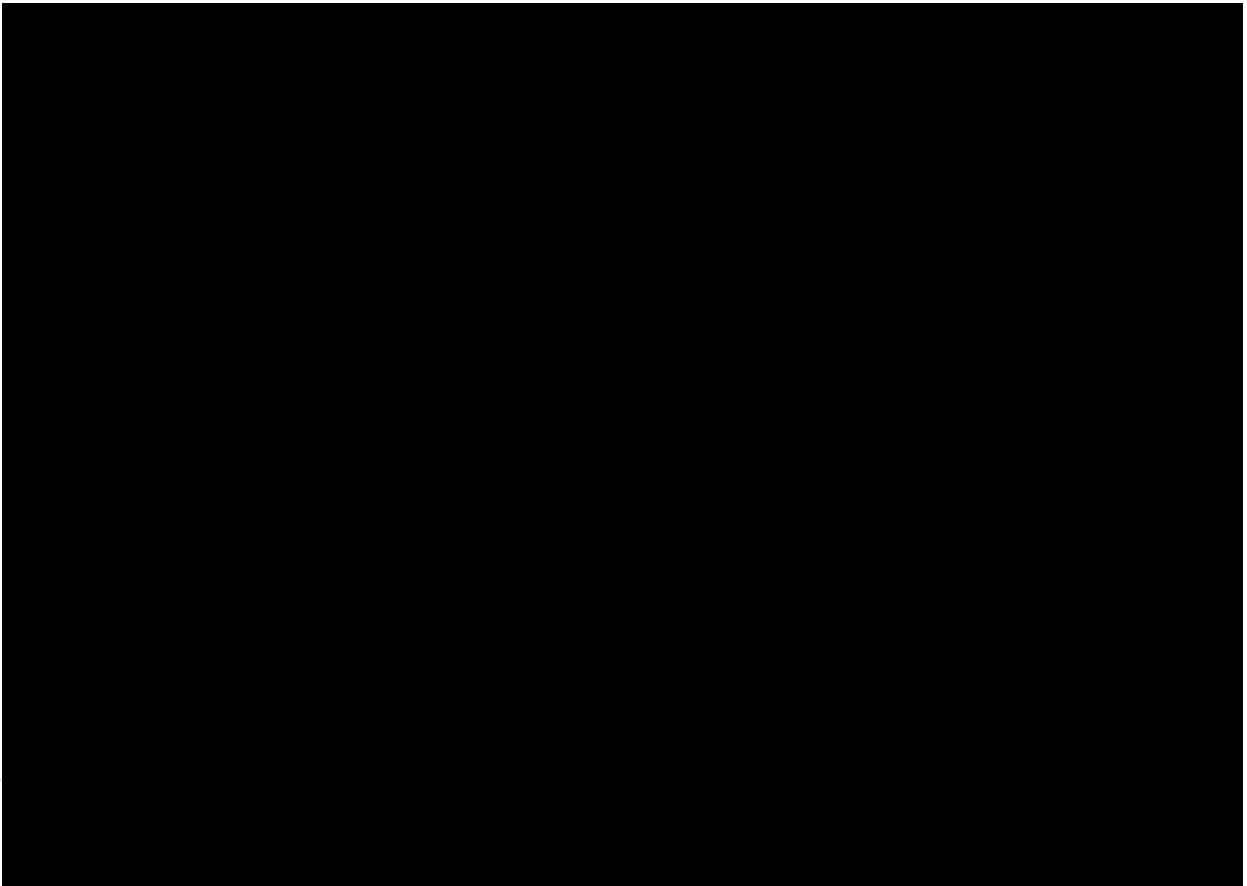
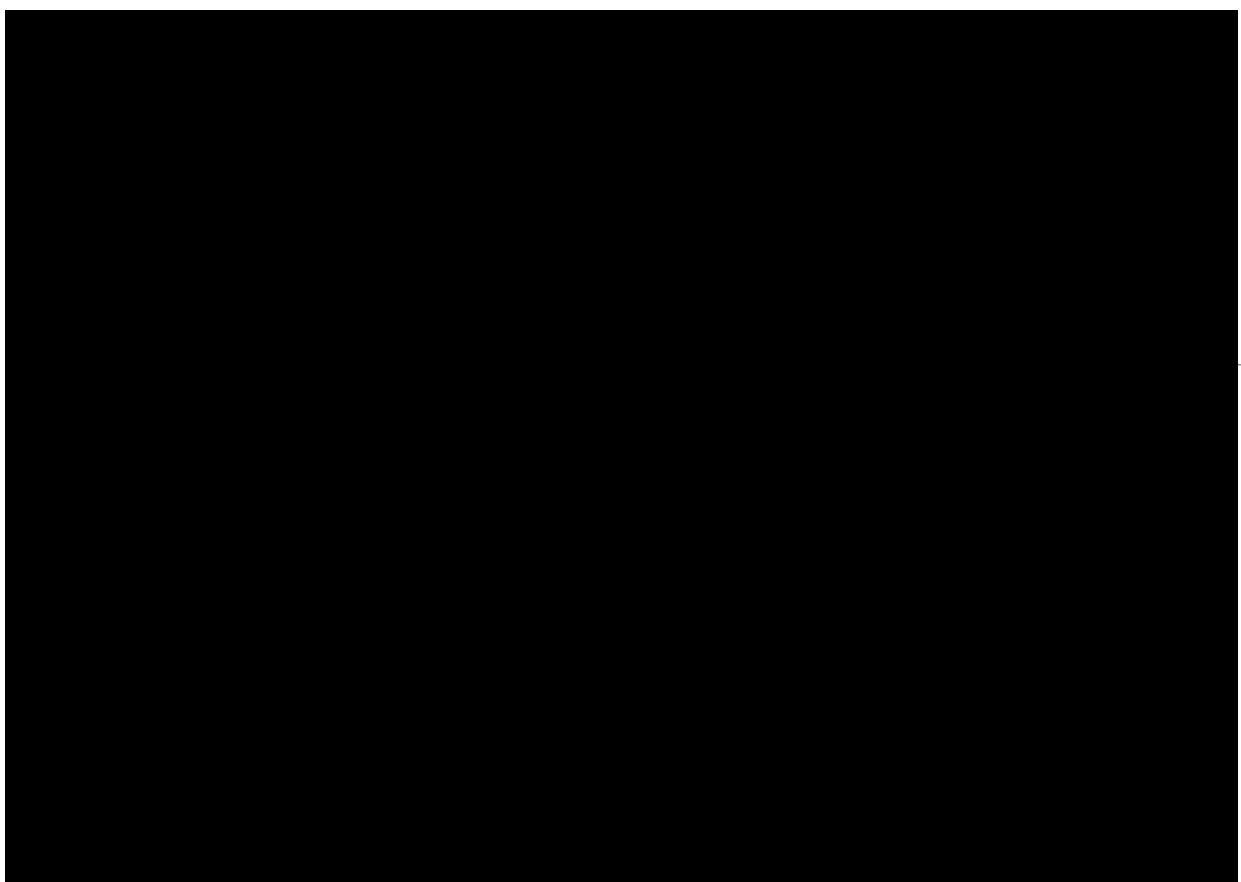


FIGURE PF-10
BASE, HIGH, LOW POWER PRICE FORECAST – NORTHERN NEVADA (ON-PEAK)



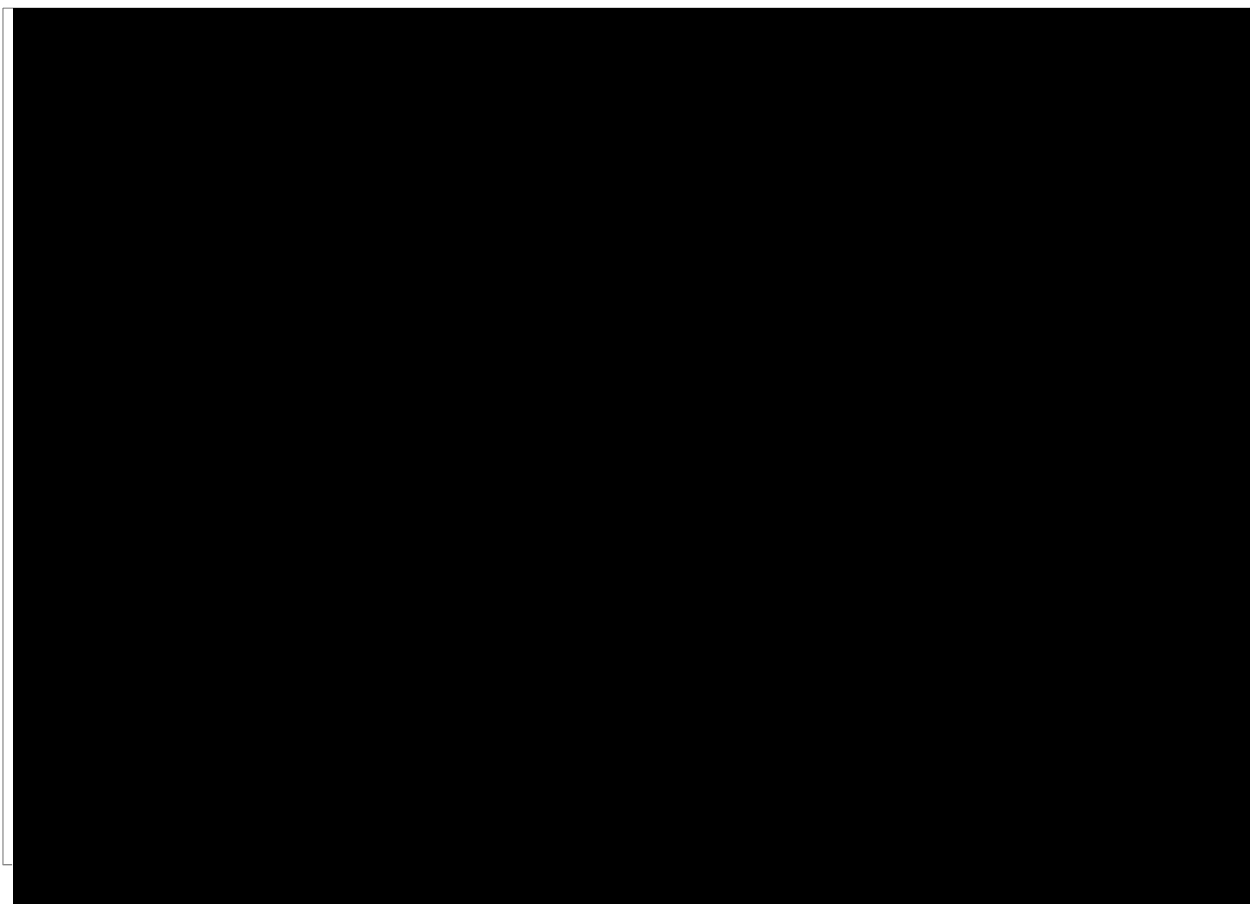
F. CAPACITY PRICE FORECAST FOR MARKET PURCHASES

The Companies have included a long-term capacity price forecast to supplement the regional power price forecast from WoodMac. The regional price forecast is used as an input to PROMOD for determining economic dispatch of market purchases against internal generation, the capacity price forecast (dollars per kW-year) is incorporated in the production cost assessment as a fixed cost to estimate the total costs associated with the Companies' open capacity position.

WoodMac's regional power price forecast represents spot firm energy prices; the energy prices do not include the full cost of new capacity that would be required to ensure resource adequacy over the forecast period. To ensure resource adequacy across the forecast horizon, WoodMac develops estimates of the levelized cost of new entry ("CONE") for combined cycle and combustion turbine generation throughout the Western Electricity Coordinating Council ("WECC"). The CONE is an estimate of the annual fixed costs associated with owning and operating a new generating facility (*i.e.*, exclusive of variable costs such as fuel and emissions) and is used to compute the long-term capacity price forecast. WoodMac calculates the annual capacity prices (in dollars per kW-year) based on the net CONE, or the levelized cost of new entry net of the revenues from energy and

ancillary services. The WoodMac fundamental forecast includes resource expansion modeling that incorporates the impact of unit retirements and resource additions. In preparation of this IRP, the Companies' have incorporated a blend of WoodMac's capacity price forecasts for Northwest Power Pool ("NWPP"), Southwest Reserve Sharing Group ("SRSG") and California to approximate the mix of purchased power. The annual capacity prices are shown in Figure PF-11.

**FIGURE PF-11
PROJECTED CAPACITY PRICES**



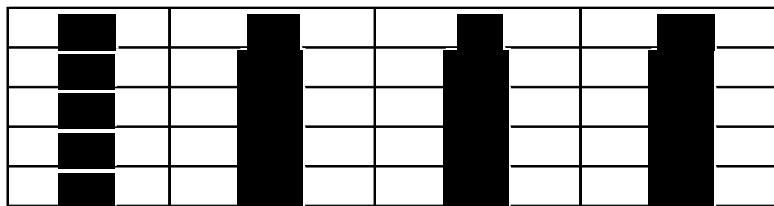
The capacity values serve as a proxy for the potential cost associated with carrying open positions (*i.e.*, until the positions are closed with firm products). The capacity adder is representative of potential additional costs that may be incurred, either in short-term power markets subject to price spikes under deficit market conditions, or as a proxy for the fixed costs of another new or existing power resource.

G. COAL PRICE FORECAST

The price of coal delivered to the Companies’ coal-fired generating units at the Valmy has been forecasted based upon the following methodology.

Market-indicative coal forecasts produced by S&P Global Market Intelligence represent forward curves for spot-traded instruments, analogous to a strip of contracts, with the shorter tenors — current year, prompt year, plus additional years if available — driven by the observed/assessed market and the longer tenors — typically years three through 20 for physically assessed markers and NYMEX futures — driven by fundamental estimates of cash costs of production, accepted returns to capital, regional productive capacity, and forecast supply and demand. For the long-tenured portion of the curve, S&P Global Market Intelligence forecasts prices for specific coal markers and defines the remaining markers via historical spreads. Forecasted base, high, and low coal prices delivered to Valmy in dollars per unit of heat content (\$/MMBtu) are developed and are shown below in Figure PF-12.

**FIGURE PF-12
PROJECTED COAL PRICES**

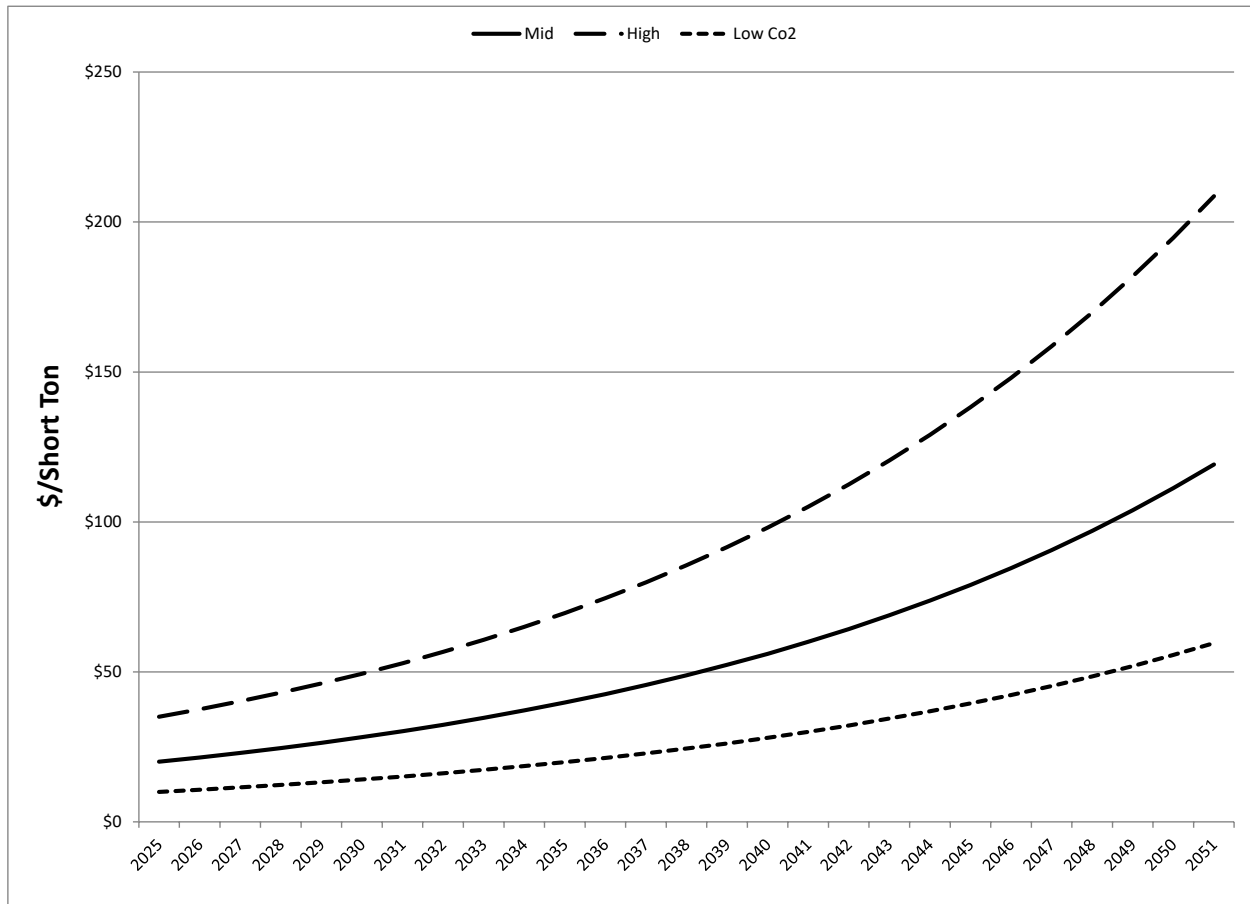


H. PRICE FORECASTS & MODELING OF POTENTIAL CARBON COSTS

The Companies have prepared price forecasts to evaluate the production cost impacts of potential future greenhouse gas (“GHG”) regulations under federal cap-and-trade pricing regimes that would commence in 2025. A separate base forecast was prepared that assumes no federal *or* Nevada specific GHG regulations are implemented. The Companies’ base planning assumption is the mid-carbon price forecast scenario using base fuel prices to assess the potential increases in total fuel and purchased power costs. Low and high-carbon price forecasts were also prepared for the base fuel forecast.

No carbon case. The Companies prepared a no-carbon forecast, assuming base fuel and purchased power prices, which does not include any costs associated with potential future GHG regulations. In its regional modeling of the WECC power markets, WoodMac’s No Carbon sensitivity to its Long-Term Outlook H2 2020 assumes no federal CO₂ mandated carbon regulation. The carbon allowance prices under the alternative CO₂ scenarios are shown in Figure PF-13.

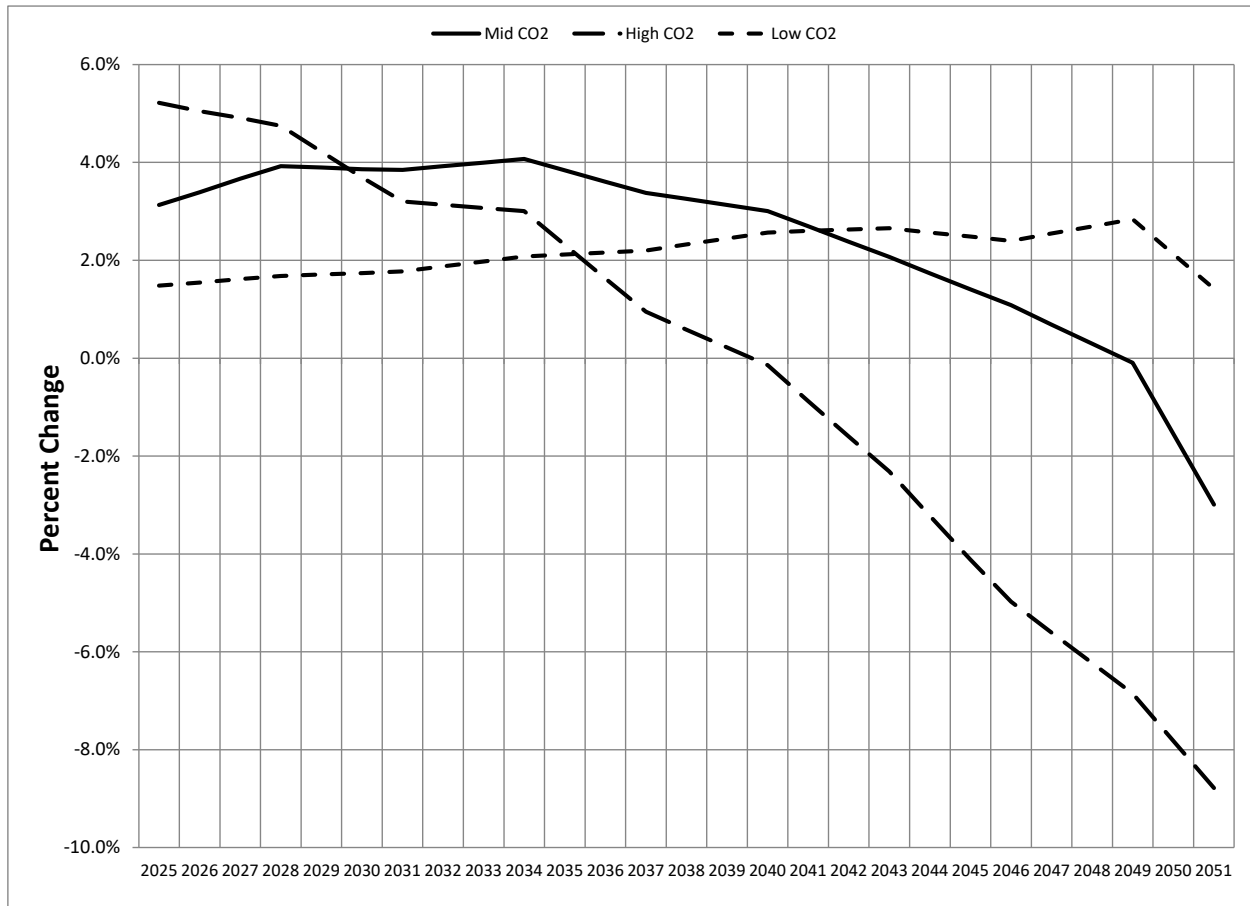
**FIGURE PF-13
CARBON ALLOWANCE PRICES**



A more detailed description of potential future GHG regulations and estimations of carbon allowance prices for the various scenarios are provided in the direct testimony of Dr. David Harrison and the Economic and Environmental Benefit Study prepared by NERA, Technical Appendix ECON-13, herein referred to as “NERA Report.”

Fuel price impacts from carbon. The production cost impacts of the six future carbon regulation scenarios were then evaluated using PROMOD. To develop inputs into those evaluations, NERA estimated how the future carbon scenarios could change the total consumer demand for fossil fuels and, thereby, impact the price levels for various fossil fuels that affect the cost of electricity in Nevada. NERA estimated the price impacts to natural gas and coal fuels, due to changes in demand for these fuels, using a proprietary energy model - the NewEra model. This model is a unique tool for effectively measuring the macroeconomic and detailed sectorial impacts of changes affecting the energy sectors. The Companies applied these price impacts (adjustors) to the no-carbon case fuel price forecasts for use in the PROMOD generation dispatch model. The percentage adjustors to natural gas prices under the carbon cases are illustrated in Figure PF-14.

FIGURE PF-14
NATURAL GAS PRICE ADJUSTMENTS FOR CARBON SCENARIOS
(HENRY HUB)

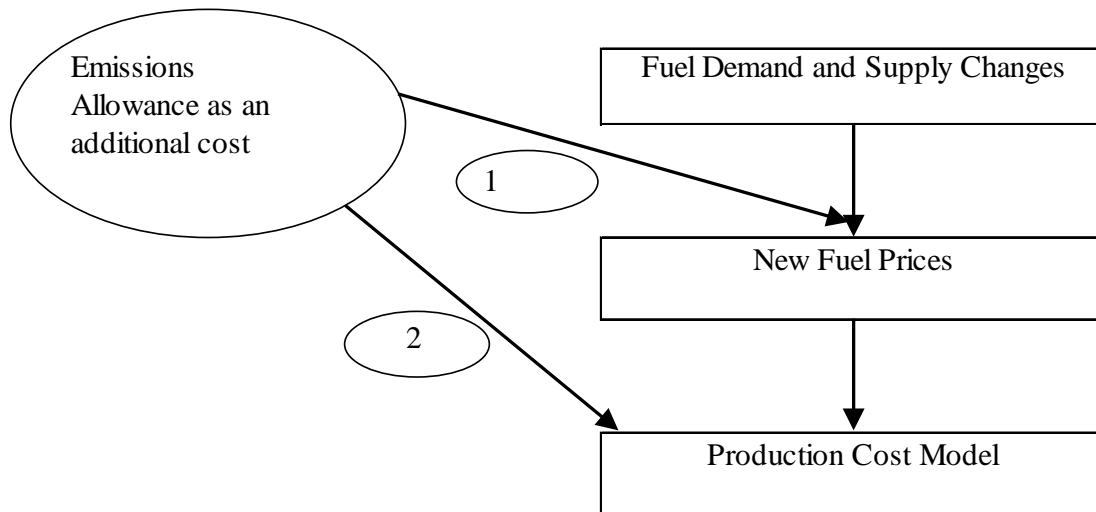


These price impacts were applied to the no-carbon natural gas price forecast from WoodMac to create natural gas price forecasts under carbon scenarios. As noted in the NERA Report, these gas price adjustments do not include the costs of CO₂ allowances shown above in Figure PF-13; the full cost of burning natural gas in electric power plants includes the cost of CO₂ allowances, which are instead included in the PROMOD modeling as a variable power production cost.

As noted in the NERA Report, the future price impacts to fossil fuels resulting from future GHG and related regulations are highly uncertain. Price impacts are subject to a range of uncertainties, including both electricity production and consumption.

Power price impacts from carbon. Estimating the effects of GHG regulation on power prices requires modeling the effects on fuel prices and on the cost of burning fossil fuels. The Companies modified the fuel price forecasts for expected changes in fuel demand and used these adjusted prices as inputs to PROMOD. The cost of carbon emissions was modeled in the variable power dispatch cost in the PROMOD modeling. This process is illustrated in Figure PF-15.

FIGURE PF-15
EXAMPLES OF MODELING POWER PRICE IMPACTS FROM CARBON



The next step was to estimate the effects on wholesale regional power of carbon allowance prices plotted in Figure PF-13. The Companies model the carbon allowance prices as being endogenous to the wholesale power market. Thus, the price of market purchases is consistently evaluated in the PROMOD economic dispatch algorithm with the Companies' own estimated costs to generate, which includes the carbon allowance prices as a variable cost based upon the emission characteristics of the Companies' generators.

As an introduction, Figure PF-16 provides an example of the computation of carbon costs to gas and generating units.

FIGURE PF-16
EXAMPLE CARBON COSTS TO POWER PRICES
(\$ per MWh)

| | A | B | C | D | E=A*B*C/D |
|-------------|--|--------------------------------|--------------------------------|------------------------------|-------------------------|
| Unit Type | CO ₂ Emission Factor (lb CO ₂ /MMBtu) | Plant Heat Rate (MMBtu/MWh) | Carbon Price (\$/Short Ton) | Conversion (lb/short ton) | Carbon Cost (\$/MWh) |
| Natural Gas | 117.1 | 7.000 | 20.00 | 2,000 | 8.20 |

The formula in the rightmost column of the table above shows that the \$/MWh potential increase in power prices for carbon costs is the product of three factors: the CO₂ emission factor for fuel type, the individual plant's heat rate, and the carbon allowance price.

To prepare estimates of how varying carbon allowance prices (as illustrated in Figure PF-13) could impact wholesale market prices for purchase power, the Companies incorporated price adders consistent with a 7,000 Btu/kWh natural gas-fired generator as illustrated in Figure PF-16. The Companies incorporated the power price adders to the base, high and low fuel price forecast scenarios to derive the new power price forecasts under the mid, high and low carbon scenarios. Finally, the power price forecasts under the carbon scenarios incorporated the net effect from the adjustments to underlying gas prices for carbon (due to supply/demand considerations) and the carbon costs (refer to Figure PF-14).

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NARRATIVE
DEMAND SIDE PLAN

**Nevada Power Company d/b/a NV Energy and
Sierra Pacific Power Company d/b/a NV Energy
2021 Joint Integrated Resource Plan (2021-
2040) Combined Demand Side Management
("DSM") Action Plan**

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**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a as NV Energy
Combined DSM Action Plan**

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**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a as NV Energy
Combined DSM Action Plan**

Section 1 – Overview and Request for Approval

Nevada Power Company d/b/a NV Energy (“Nevada Power”) and Sierra Pacific Power Company d/b/a NV Energy (“Sierra,” and collectively with Nevada Power, “NV Energy” or the “Companies”) are filing, as part of their 2021 Joint Integrated Resource Plan (“IRP”) (2022-2040), Combined Demand Side Management (“DSM”) three-year Action Plan (“DSM Plan”) for the program period of 2022 through 2024 pursuant to Nevada Administrative Code (“NAC”) §§ 704.9006, 704.9057, 704.9156, 704.934, and 704.9489 with the Public Utilities Commission of Nevada (“PUCN” or “Commission”).

NV Energy’s DSM Plan presents an analysis of results for the program year 2020, and an update on program and compliance activities for the current program year 2021 in accordance with NAC 704.934(7). Further details on NV Energy’s 2020 DSM results are presented in Section 2. In Docket No. 20-07004, NV Energy received approval for a total DSM Plan budget of \$51.9 million targeting 333,264,129 kilowatt-hours (“kWh”) and 264,552 kilowatts (“kW”) in savings for 2021.¹ Further details on 2021 goals and savings targets are presented in Section 3.

NV Energy is proposing a demand side plan to continue its DSM energy efficiency and conservation program investments for program years 2022 through 2024. The DSM Plan represents an expansion of energy efficiency and Demand Response (“DR”) program activities. The DSM Plan includes programmatic and budgetary changes to DSM programs for program years 2022 through 2024. NV Energy requests approval from the Commission and submits that this DSM Plan strikes an appropriate balance among energy savings, costs of those savings, customer rate impacts, and impacts to NV Energy. The Companies have proposed to administer a cost-effective DSM Plan that accomplishes the Companies’ goal of fostering the development and implementation of energy efficiency in Nevada. NV Energy continues to have success in identifying program efficiencies and optimizing program designs to drive energy savings, while reducing the overall cost to customers.

Table DSM-1 presents Nevada Power’s and Sierra’s distinct DSM Plans that are designed to meet an energy savings target for each utility of 1.1 percent on average for the three-year action plan period of 2022 through 2024 pursuant to NRS § 704.7836 and NAC §§ 704.9212 and 704.934(2)(d). Also presented are NV Energy’s statewide budget proposals and savings targets. The proposed NV Energy budgets presented below in Table DSM-1 are \$58,299,000 for 2022, \$60,828,000 for 2023, and \$62,943,000 for 2024. Presented in Table DSM-16 are the projected Non-Energy Benefits Total Resource Cost (“NTRC”) benefits/cost ratios, which are: 2.41 for 2022, 2.47 for 2023, and 2.58 for 2024. Table DSM-16 also shows that the DSM Plan is estimated to bring a net benefit to the communities served by NV Energy of \$153.1 million for 2022, \$166.3 million for 2023, and \$184.7 million for 2024. Further details on NV Energy’s proposed 2022-2024 DSM Plan are presented in Section 4.

¹ November 16, 2020, Order at Att. A, Att. 1.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a as NV Energy
Combined DSM Action Plan**

Table DSM-1: 2022-2024 Proposed DSM Portfolio Budgets and Targets

| Nevada Power | 2022 | 2023 | 2024 | Action Plan Total |
|---|----------------|----------------|----------------|--------------------------|
| Budget | \$44,365,000 | \$46,197,000 | \$47,797,000 | \$138,359,000 |
| Retail Sales (kWh) | 20,330,899,896 | 20,806,137,495 | 21,156,796,194 | 62,293,833,584 |
| 1.1% Target (kWh) | 223,639,899 | 228,867,512 | 232,724,758 | 685,232,169 |
| Energy Savings Target (kWh) | 223,756,000 | 228,317,500 | 233,536,375 | 685,609,875 |
| % Energy Savings to Retail Sales | 1.1% | 1.1% | 1.1% | 1.1% |
| Sierra | | | | |
| Budget | \$13,934,000 | \$14,631,000 | \$15,146,000 | \$43,711,000 |
| Retail Sales (kWh) | 8,553,322,061 | 8,804,856,380 | 9,135,310,851 | 26,493,489,292 |
| 1.1% Target (kWh) | 94,086,543 | 96,853,420 | 100,488,419 | 291,428,382 |
| Energy Savings Target (kWh) | 94,655,000 | 96,845,000 | 99,937,000 | 291,437,000 |
| % Energy Savings to Retail Sales | 1.1% | 1.1% | 1.1% | 1.1% |
| NV Energy | | | | |
| Budget | \$58,299,000 | \$60,828,000 | \$62,943,000 | \$182,070,000 |
| Retail Sales (kWh) | 28,884,221,956 | 29,610,993,875 | 30,292,107,045 | 88,787,322,876 |
| 1.1% Target (kWh) | 317,726,442 | 325,720,933 | 333,213,177 | 976,660,552 |
| Energy Savings Target (kWh) | 318,411,000 | 325,162,500 | 333,473,375 | 977,046,875 |
| % Energy Savings to Retail Sales | 1.1% | 1.1% | 1.1% | 1.1% |

Legislative Activities

In response to Senate Bill 150 (“SB150”) and Assembly Bill 223 (“AB223”) enacted by the 2017 Nevada Legislature and implementing regulations,² the DSM Plan is:

- Maximizing annual energy savings to achieve an average of 1.1 percent of the weather normalized retail sales over the 2022 through 2024 action plan period by utility,³
- Eliminating the requirement to use the Total Resource Cost (“TRC”) test and instead NV Energy is using a test of cost effectiveness that accounts for the non-energy benefits of a program, the Non-energy Benefit Total Resource Cost (“NTRC”) test, and
- Proposing to expend at least 5 percent of the total annual expenditures on energy efficiency measures directed at low-income customers.⁴

Enacted by the 2019 Nevada Legislature, AB54 adopted lighting standards that set a 45 lumens per watt baseline. As a result of the AB54 adoption and stipulation reached in Docket No. 20-07004, the following was implemented:

- Based on the data included in shelf studies performed in the first three months of 2021, NV Energy informed the “Big Box” retailers (Target, Walmart, Costco and Sam’s Club) on

² LCB File No. R055-18 effective June 26, 2019, and codified under NAC §§ 704.9212, 704.934(6), and 704.934(8).

³ NAC § 704.9212.

⁴ NAC § 704.934(8).

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April 12, 2021, and the larger home improvement retailers (Lowes and Home Depot) on May 6, 2021, that incentives for the NV Energy Residential Lighting program were being terminated immediately due to these retailers being at/or near the 90 percent compliant threshold identified by paragraph 7(a)(v) of the stipulation.⁵ Smaller hardware stores and discount stores, that were not close to reaching the threshold will remain active in the program through June 30, 2021.

- NV Energy was unable to design a suitable new retail measure mix with incentives that would be cost effective following the Transition Period. Therefore, for the 2019-2021 DSM Plan period remaining after the Transition Period, NV Energy will not be offering the Residential Lighting program incentives at retail locations, as required by paragraph 7(a)(v) of the stipulation 2021,
- Piloting a low-income food bank lighting program that will provide more efficient light bulbs at no cost to customers through the end of 2021, and
- Eliminating the Residential Lighting program for program years 2022 through 2024.

Overview of the Plan

The DSM Plan is presented in seven sections. Section 1 provides the overview of the DSM Plan and relevant legislative activities; requests approval of the 2020 DSM portfolio results and proposed three-year action plan for the period of 2022 through 2024; and includes cross-references to the applicable Commission regulations, compliance items, orders, and directives. The cross-reference table also indicates the location in the filing that fulfills each requirement, which are presented in Table DSM-4. Section 2 provides a summary of the DSM activities and results for program year 2020 and for prior program years. Section 3 describes the 2021 program year budgets, savings targets, and participation goals and presents updates. Section 4 presents the proposed three-year action plan for 2022 through 2024. Sections 5 through 7 provide a section overview for the Education Services, Residential Services, and Non-Residential Services that are provided by the DSM Plan programs. Additionally, provided under Sections 5 through 7 are the overviews for each of the corresponding program data sheets, which include (1) program description, expenditures, achieved energy and demand savings kilowatt, and participant/unit results for 2020; (2) Commission-authorized budgets, energy and demand savings targets, and participant/unit goals for 2021; and (3) proposed program budgets, energy and demand savings targets, and participant/unit goals for 2022 through 2024.

The DSM Plan includes a set of Technical Appendices that (1) provide supporting documents, data, information, descriptions of NV Energy's cost-effectiveness model and Measurement and Verification ("M&V") reports to meet compliance requirements, and (2) support the requests for approval in this filing. The results of NV Energy's cost-effectiveness model and an in-depth analysis of each program's performance are provided in the applicable program data sheet.

⁵ Docket No. 20-07004

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In compliance with the Commission's direction, concurrent with the filing of this DSM Plan, NV Energy has provided to the Commission's Regulatory Operations Staff ("Staff") and the Bureau of Consumer Protection ("BCP") all supporting information and data in executable format upon which it relied to develop cost-benefit calculations ("Workpapers").⁶ The Workpapers include all spreadsheets and calculations prepared by NV Energy in support of the filing, as well as by any outside M&V contractors and consultants, in executable and manipulative format.

DSM Plan Cost Effectiveness

There are five generally accepted basic cost-benefit tests. The tests are used for comparing demand and supply management alternatives. Each test represents a measure of cost effectiveness from a distinct perspective. The tests are (1) NTRC and TRC, (2) Rate Impact Measure ("RIM"), (3) Utility Cost Test ("UCT"), (4) Participant Cost Test ("PCT"), and (5) Societal Cost Test ("SCT").

In accordance with NAC § 704.934(6), "For any energy efficiency or conservation program which reduces the consumption of electricity or any fossil fuel, a utility shall include in its demand side plan a complete life-cycle analysis of the costs and benefits of the program using at least one standard test of cost effectiveness that accounts for the nonenergy benefits of the program," NV Energy is providing the NTRC as its primary cost effectiveness test, which includes non-energy benefits.

NV Energy calculates and presents the standard five benefit-cost test ratios along with the resulting ratios. NV Energy provides a modified version of the TRC test, which includes a non-energy benefit, identified as NTRC. The NTRC incorporates a non-energy benefit adder for each DSM program, which is based on each program's market segment, and is presented in Table DSM-16. Depending on the percentage of low-income participation in the program, the non-energy benefit adder is adjusted using a weighted average formula. NV Energy is proposing a new cost effectiveness model as part of its DSM Plan. Further information and discussion on each of the cost effectiveness tests and the new cost effectiveness model are provided in Section 4 "Overview of the Financial Model." The results from each of the cost effectiveness tests are provided in Sections 5 through 7, at the end of each program data sheet. Additionally, in the "Inputs and Outputs" section included in the program data sheets are the results comparison between NV Energy's currently authorized model and the new cost effectiveness model.

Request for Approval for 2020 DSM Portfolio Results

Pursuant to NAC § 704.934(7), NV Energy requests that the Commission accept the results of the Companies' 2020 DSM program activities, which are provided in Section 2 and Sections 5 through 7.

Pursuant to NAC §§ 704.934(7) and 704.9522, NV Energy requests that the Commission accept the Companies' M&V reports for DSM programs delivered during the 2020 program year, which are provided in Technical Appendices DSM-5 through DSM-17.

⁶ See Consolidated Docket Nos. 12-06052 and 12-06053, December 24, 2012, Order at 191, para. 11.

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NV Energy requests that the Commission accept the Companies' responses to the directives from the December 24, 2019, Order in Docket No. 19-07004.

Request for Approval of the DSM 2022-2024 Action Plan

Pursuant to NRS § 704.751 and NAC § 704.9494, NV Energy requests that the Commission accept the proposed DSM Plan for the period of 2022 through 2024. NV Energy is requesting specific acceptance of the Companies' proposed budgets and energy savings targets as presented in Table DSM-3 below. Details of NV Energy's proposed DSM Plan programs, goals, and energy savings targets are provided in Section 4 through 7.

NV Energy requests that the Commission accept the Companies' newly proposed cost-effectiveness model and find that the model complies with NAC § 704.9522.

Table DSM-2 below provides a high-level explanation of DSM programs and enhancements proposed for NV Energy's action plan period 2022 through 2024. The first column presents the 2019-2021 DSM programs authorized by the Commission in Docket No. 18-06003. The second column represents changes to program names or re-groupings of programs from the 2019-2021 programs versus the 2022-2024 program years. The third column presents proposed DSM portfolio of program nomenclature for the action plan period.

Table DSM-2: Proposed DSM Portfolio for 2022-2024

| 2019-2021 Programs | Proposed [1] | 2022-2024 Programs |
|---|---|--|
| Outreach & Program Development | Modify sub-grouping name | Educational Services Programs |
| Energy Education | No change to name or components. | Energy Education |
| Energy Reports | No change to name or components. | Energy Reports |
| Energy Assessments | Split into two programs- Online Energy and In-home Energy Assessments. Online Energy Assessments will remain an Educational Program and In-home Energy Assessments is proposed as a Residential Services Program. | Online Energy Assessments |
| Program Development | No change to name | Program Development |
| Home Services | Changed name | Residential Services Programs |
| Residential Lighting | Terminated the program | |
| Residential AC (Nevada Power) | Added as a component to the 2022-2024 Residential Equipment and Plug Loads program. The program will be offered to both Nevada Power and Sierra customers. | Residential Equipment and Plug Loads (includes Residential AC and Pool Pumps components) |
| Pool Pumps (Nevada Power) | Added as a component to the 2022-2024 Residential Equipment and Plug Loads program. NV Energy will continue to offer the program to Nevada Power customers only. | |
| Low Income | No change to name. | Low Income |

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| 2019-2021 Programs | Proposed [1] | 2022-2024 Programs |
|-------------------------------|--|--|
| Direct Install | Will add a Deep Retrofit component to the program for 2022-2024. | Direct Install and Deep Retrofits |
| Residential DR (Build/Manage) | No change to name. | Residential DR (Build/Manage) |
| | Proposed new program. | In-home Energy Assessments |
| | Proposed new program. | Residential Codes and New Construction |
| Business Services | Modify sub-grouping name | Non-Residential Services Programs |
| Commercial DR (Build/Manage) | No change to name. | Commercial DR (Build/Manage) |
| Commercial Services | Name changed. | Business Energy Services |
| Schools Program | Name changed. | Energy Efficient Schools |

[1] Other enhancements are provided in each program's data sheet.

Table DSM-3 presents the Companies' proposed budgets and energy savings targets for the action plan period.

Table DSM-3: 2022-2024 Proposed DSM Portfolio Budgets and Savings Targets

| Programs | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) |
|--|--------------------|---------------------|-----------------------------|--------------------|---------------------|-----------------------------|--------------------|---------------------|-----------------------------|
| Nevada Power | 2022 | | | 2023 | | | 2024 | | |
| Energy Education | \$450,000 | 72 | 600,000 | \$450,000 | 72 | 600,000 | \$450,000 | 72 | 600,000 |
| Energy Reports | \$725,000 | 4,445 | 11,600,000 | \$725,000 | 4,445 | 11,600,000 | \$725,000 | 4,445 | 11,600,000 |
| Online Energy Assessments | \$1,050,000 | 0 | 0 | \$1,050,000 | 0 | 0 | \$1,050,000 | 0 | 0 |
| Program Development | \$200,000 | 0 | 0 | \$200,000 | 0 | 0 | \$200,000 | 0 | 0 |
| Education Services Total | \$2,425,000 | 4,517 | 12,200,000 | \$2,425,000 | 4,517 | 12,200,000 | \$2,425,000 | 4,517 | 12,200,000 |
| Residential Equipment and Plug Loads | \$5,600,000 | 3,383 | 9,600,000 | \$5,800,000 | 3,428 | 10,100,000 | \$5,900,000 | 3,454 | 10,400,000 |
| Residential Codes and New Construction | \$420,000 | 160 | 596,000 | \$1,100,000 | 440 | 1,640,000 | \$1,560,000 | 1,126 | 4,200,000 |
| Low Income | \$2,220,000 | 164 | 1,350,000 | \$2,312,000 | 172 | 1,417,500 | \$2,392,000 | 182 | 1,503,375 |
| Direct Install and Deep Retrofits | \$680,000 | 528 | 2,140,000 | \$740,000 | 588 | 2,320,000 | \$800,000 | 654 | 2,500,000 |
| Residential Demand Response - Manage | \$7,100,000 | 172,000 | 22,000,000 | \$7,800,000 | 185,000 | 24,800,000 | \$8,600,000 | 198,000 | 26,900,000 |
| Residential Demand Response - Build | \$7,900,000 | 23,000 | 3,900,000 | \$7,900,000 | 23,000 | 4,100,000 | \$7,900,000 | 23,000 | 4,300,000 |

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| Programs | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) |
|--|---------------------|---------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------|---------------------|-----------------------------|
| In-Home Energy Assessments | \$1,070,000 | 768 | 2,000,000 | \$1,070,000 | 768 | 2,000,000 | \$1,070,000 | 768 | 2,000,000 |
| Residential Services Total | \$24,990,000 | 200,003 | 41,586,000 | \$26,722,000 | 213,396 | 46,377,500 | \$28,222,000 | 227,184 | 51,803,375 |
| Energy Smart Schools | \$1,350,000 | 5,289 | 14,500,000 | \$1,350,000 | 5,289 | 14,500,000 | \$1,350,000 | 5,289 | 14,500,000 |
| Business Energy Services | \$14,000,000 | 14,070 | 148,000,000 | \$14,000,000 | 14,070 | 148,000,000 | \$14,000,000 | 14,070 | 148,000,000 |
| Commercial Demand Response - Manage | \$800,000 | 19,000 | 7,000,000 | \$900,000 | 21,000 | 6,770,000 | \$1,000,000 | 23,000 | 6,563,000 |
| Commercial Demand Response - Build | \$800,000 | 3,000 | 470,000 | \$800,000 | 3,000 | 470,000 | \$800,000 | 3,000 | 470,000 |
| Non-Residential Services Total | \$16,950,000 | 41,359 | 169,970,000 | \$17,050,000 | 43,359 | 169,740,000 | \$17,150,000 | 45,359 | 169,533,000 |
| Nevada Power Total | \$44,365,000 | 245,879 | 223,756,000 | \$46,197,000 | 261,272 | 228,317,500 | \$47,797,000 | 277,060 | 233,536,375 |
| Sierra | 2022 | | | 2023 | | | 2024 | | |
| Energy Education | \$310,000 | 51 | 400,000 | \$310,000 | 51 | 400,000 | \$310,000 | 51 | 400,000 |
| Energy Reports | \$390,000 | 2,539 | 7,100,000 | \$390,000 | 2,539 | 7,100,000 | \$390,000 | 2,539 | 7,100,000 |
| Online Energy Assessments | \$420,000 | 0 | 0 | \$420,000 | 0 | 0 | \$420,000 | 0 | 0 |
| Program Development | \$70,000 | 0 | 0 | \$70,000 | 0 | 0 | \$70,000 | 0 | 0 |
| Education Services Total | \$1,190,000 | 2,590 | 7,500,000 | \$1,190,000 | 2,590 | 7,500,000 | \$1,190,000 | 2,590 | 7,500,000 |
| Residential Equipment and Plug Loads | \$800,000 | 212 | 1,400,000 | \$880,000 | 233 | 1,610,000 | \$930,000 | 246 | 1,740,000 |
| Residential Codes and New Construction | \$280,000 | 100 | 400,000 | \$720,000 | 351 | 1,400,000 | \$1,040,000 | 876 | 3,500,000 |
| Low Income | \$704,000 | 40 | 300,000 | \$731,000 | 40 | 300,000 | \$756,000 | 40 | 300,000 |
| Direct Install and Deep Retrofits | \$370,000 | 153 | 800,000 | \$390,000 | 177 | 900,000 | \$410,000 | 197 | 1,000,000 |
| Residential Demand Response - Manage | \$750,000 | 12,251 | 1,550,000 | \$800,000 | 13,000 | 2,150,000 | \$900,000 | 13,000 | 2,660,000 |

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| Programs | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) |
|--|---------------------|---------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------|---------------------|-----------------------------|
| Residential Demand Response - Build | \$2,000,000 | 3,000 | 700,000 | \$2,000,000 | 3,000 | 700,000 | \$2,000,000 | 3,000 | 700,000 |
| In-Home Energy Assessments | \$380,000 | 215 | 600,000 | \$380,000 | 215 | 600,000 | \$380,000 | 215 | 600,000 |
| Residential Services Total | \$5,284,000 | 15,971 | 5,750,000 | \$5,901,000 | 17,016 | 7,660,000 | \$6,416,000 | 17,574 | 10,500,000 |
| Energy Smart Schools | \$770,000 | 1,005 | 9,000,000 | \$770,000 | 1,005 | 9,000,000 | \$770,000 | 1,005 | 9,000,000 |
| Business Energy Services | \$5,700,000 | 5,984 | 71,300,000 | \$5,700,000 | 5,984 | 71,300,000 | \$5,700,000 | 5,984 | 71,300,000 |
| Commercial Demand Response - Manage | \$320,000 | 3,017 | 750,000 | \$400,000 | 6,000 | 1,030,000 | \$400,000 | 7,000 | 1,282,000 |
| Commercial Demand Response - Build | \$670,000 | 1,000 | 355,000 | \$670,000 | 1,000 | 355,000 | \$670,000 | 1,000 | 355,000 |
| Non-Residential Services Total | \$7,460,000 | 11,006 | 81,405,000 | \$7,540,000 | 13,989 | 81,685,000 | \$7,540,000 | 14,989 | 81,937,000 |
| Sierra Total | \$13,934,000 | 29,567 | 94,655,000 | \$14,631,000 | 33,595 | 96,845,000 | \$15,146,000 | 35,153 | 99,937,000 |
| NV Energy | 2022 | | | 2023 | | | 2024 | | |
| Energy Education | \$760,000 | 123 | 1,000,000 | \$760,000 | 123 | 1,000,000 | \$760,000 | 123 | 1,000,000 |
| Energy Reports | \$1,115,000 | 6,984 | 18,700,000 | \$1,115,000 | 6,984 | 18,700,000 | \$1,115,000 | 6,984 | 18,700,000 |
| Online Energy Assessments | \$1,470,000 | 0 | 0 | \$1,470,000 | 0 | 0 | \$1,470,000 | 0 | 0 |
| Program Development | \$270,000 | 0 | 0 | \$270,000 | 0 | 0 | \$270,000 | 0 | 0 |
| Education Services Total | \$3,615,000 | 7,107 | 19,700,000 | \$3,615,000 | 7,107 | 19,700,000 | \$3,615,000 | 7,107 | 19,700,000 |
| Residential Equipment and Plug Loads | \$6,400,000 | 3,595 | 11,000,000 | \$6,680,000 | 3,661 | 11,710,000 | \$6,830,000 | 3,700 | 12,140,000 |
| Residential Codes and New Construction | \$700,000 | 260 | 996,000 | \$1,820,000 | 791 | 3,040,000 | \$2,600,000 | 2,002 | 7,700,000 |
| Low Income | \$2,924,000 | 204 | 1,650,000 | \$3,043,000 | 212 | 1,717,500 | \$3,148,000 | 222 | 1,803,375 |
| Direct Install and Deep Retrofits | \$1,050,000 | 681 | 2,940,000 | \$1,130,000 | 765 | 3,220,000 | \$1,210,000 | 851 | 3,500,000 |
| Residential Demand | \$7,850,000 | 184,251 | 23,550,000 | \$8,600,000 | 198,000 | 26,950,000 | \$9,500,000 | 211,000 | 29,560,000 |

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| Programs | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Demand Savings (kW) | Annual Energy Savings (kWh) |
|---------------------------------------|---------------------|---------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------|---------------------|-----------------------------|
| Response - Manage | | | | | | | | | |
| Residential Demand Response - Build | \$9,900,000 | 26,000 | 4,600,000 | \$9,900,000 | 26,000 | 4,800,000 | \$9,900,000 | 26,000 | 5,000,000 |
| In-Home Energy Assessments | \$1,450,000 | 983 | 2,600,000 | \$1,450,000 | 983 | 2,600,000 | \$1,450,000 | 983 | 2,600,000 |
| Residential Services Total | \$30,274,000 | 215,974 | 47,336,000 | \$32,623,000 | 230,412 | 54,037,500 | \$34,638,000 | 244,758 | 62,303,375 |
| Energy Smart Schools | \$2,120,000 | 6,294 | 23,500,000 | \$2,120,000 | 6,294 | 23,500,000 | \$2,120,000 | 6,294 | 23,500,000 |
| Business Energy Services | \$19,700,000 | 20,054 | 219,300,000 | \$19,700,000 | 20,054 | 219,300,000 | \$19,700,000 | 20,054 | 219,300,000 |
| Commercial Demand Response - Manage | \$1,120,000 | 22,017 | 7,750,000 | \$1,300,000 | 27,000 | 7,800,000 | \$1,400,000 | 30,000 | 7,845,000 |
| Commercial Demand Response - Build | \$1,470,000 | 4,000 | 825,000 | \$1,470,000 | 4,000 | 825,000 | \$1,470,000 | 4,000 | 825,000 |
| Non-Residential Services Total | \$24,410,000 | 52,365 | 251,375,000 | \$24,590,000 | 57,348 | 251,425,000 | \$24,690,000 | 60,348 | 251,470,000 |
| NV Energy Total | \$58,299,000 | 275,446 | 318,411,000 | \$60,828,000 | 294,867 | 325,162,500 | \$62,943,000 | 312,213 | 333,473,375 |

[1] Energy (kWh) and demand (kw) savings are not tracked for this program, because it is predicated on testing and trials of new potential programs and/or technologies.

Regulations, Compliance Items, and Directives

NV Energy requests that the Commission find that the Companies have satisfied the items listed as requirement in Table DSM-4 below.

Table DSM-4: DSM IRP Requirements Cross-Reference

| Regulatory Requirement | Description | Location of Provided Data |
|------------------------|--|--|
| NAC § 704.9212 (1)(a) | For the period beginning on January 1, 2022, and ending on December 31, 2024, an amount of energy savings resulting from the implementation of energy efficiency programs by the electric utility that results in an average reduction during the period of 1.1 percent of the forecasted weather normalized sales of the electric utility for the period. | Sections 1 and 4 |
| NAC § 704.922 | A utility's resource plan must include a technical appendix. The appendix must contain sufficient detail to enable a technically proficient reader to understand how the resource plan and its forecasts were prepared and to evaluate the validity of the assumptions and the accuracy of the data used, including, without limitation, a list | Technical Appendices DSM-01 through DSM-29 and workpapers to this instant filing |

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| Regulatory Requirement | Description | Location of Provided Data |
|-------------------------------|--|---|
| | of the major assumptions used, a description of the forecasting methods employed and a description of the software utilized. | |
| NAC § 704.934 (1) | As part of its resource plan, a utility shall submit a demand side plan that is cost effective as a whole. | Section 1 and Sections 4 through 7 |
| NAC § 704.934 (2) | (a) An identification of end-uses for programs for energy efficiency and conservation. (b) An assessment of savings attributable to technically feasible programs for energy efficiency and conservation, as determined by the utility. The programs must be ranked in a list according to the level of savings in energy or reduction in demand, or both. (c) An assessment of technically feasible programs to determine which will produce benefits in peak demand or energy consumption. The utility shall estimate the cost of each such program. The methods used for the assessment must be stated in detail, specifically listing the data and assumptions considered in the assessment. (d) An energy efficiency plan which complies with the requirements of NRS 704.7836, and which includes any additional goals for energy savings established by the Commission. | Sections 1 through 7 |
| NAC § 704.934 (3) | In creating its demand side plan, a utility shall consider the impact of applicable new technologies on current and future energy efficiency and conservation options. The consideration of new technologies must include, without limitation, consideration of the potential impact of advances in digital technology and computer information systems. | Section 4 |
| NAC § 704.934 (4) | A utility shall include in its demand side plan an energy efficiency program for residential customers which reduces the consumption of electricity or any fossil fuel. The energy efficiency program must include, without limitation, the use of new solar thermal energy sources. | Sections 4 through 6 |
| NAC § 704.934 (5) | The demand side plan must provide a list of the programs for which the utility is requesting the approval of the Commission. The list must include, without limitation: (a) An estimate of the reduction in the peak demand and energy consumption that would result from each proposed program, in kilowatt-hours and kilowatts saved. The programs must be listed according to their expected savings and their contribution to a reduction in peak demand and energy consumption based upon realistic estimates of the penetration of the market and the average life of the programs. (b) An assessment of the costs of each proposed program and the savings produced by the program. If the program can be relied upon to reduce peak demand on a firm basis, the assessment must include the savings in the costs of transmission and distribution. (c) An assessment of the impact on the utility's load shapes of each proposed and existing program for energy efficiency and conservation. (d) If a program is an educational program, the projected expenses of the utility for the educational program. | Section 1 and Sections 4 through 7 |
| NAC § 704.934 (6) | For any energy efficiency or conservation program which reduces the consumption of electricity or any fossil fuel, a utility shall include in its demand side plan a complete life-cycle analysis of the costs and benefits of the program using at least one standard test of cost effectiveness that accounts for the non-energy benefits of the program. | Sections 4 through 7 (programs' data sheets) |
| NAC § 704.934 (7) | The utility shall include with its demand side plan a report on the status of all programs for energy efficiency and conservation that have been approved by the Commission. The report must include tables for each such program showing, for each year, the planned and achieved reduction in kilowatt-hours, the reduction in kilowatts and the cost of the program. | Sections 2 and 3 |
| NAC § 704.934 (8) | Not less than 5 percent of the total expenditures related to energy efficiency and conservation programs in the demand side plan must be directed to energy efficiency and conservation programs for low-income customers of the electric utility. | Sections 1, 2 and 4 and Section 6 - Low Income program data sheet |
| NAC § 704.9359 | The environmental costs to the State associated with operating and maintaining a supply plan or demand side plan must be quantified for air emissions, water and land use and the social cost of carbon as calculated pursuant to subsection 5 of NAC 704.937. Environmental costs are those costs, wherever they may occur, that result from harm or risks of harm to the environment after the application of all | Section 4 |

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| Regulatory Requirement | Description | Location of Provided Data |
|---|--|---|
| | mitigation measures required by existing environmental regulation or otherwise included in the resource plan. | |
| NAC § 704.9489 | 1. Each resource plan of a utility must include a detailed action plan based on an integrated analysis of the demand side plan and supply plan of the utility. In its action plan, the utility shall specify all its actions that are to take place during the 3 years commencing with the year following the year in which the resource plan is filed. The action plan must contain: (a) An introductory section that explains how the action plan fits into the longer-term strategic plan of the utility. (b) A list of actions for which the utility is seeking the approval of the Commission. (c) A schedule for the acquisition of data, including planned activities to update and refine the quality of the data used in forecasting. (d) A specific timetable for acquisition of options for the supply of electric energy and for programs for energy efficiency and conservation. (e) If changes in the methodology are being proposed, a description fully justifying the proposed changes, including an analysis of the costs and benefits. Any changes in methodology that are approved by the Commission must be maintained for the period described in the action plan. (f) A section describing any plans of the utility to acquire additional modeling instruments. (g) A section for the utility's program for energy efficiency and conservation, including: (1) A description of continued planning efforts; (2) A plan to carry out and continue selected measures for energy efficiency and conservation that have been identified as desirable; and (3) Any impacts of imputed debt calculations associated with energy efficiency contracts in the preferred plan. (h) A section for the utility's program for acquisition of resources for the supply of electric energy for the period covered by the action plan, including: (4) Any impacts of imputed debt calculations associated with renewable energy contracts or energy efficiency contracts in the preferred plan. 3. The action plan must contain a budget for planned expenditures suitable for comparing planned and achieved expenditures. The budget must be organized in the following categories: (b) Energy efficiency and conservation. | Section 1 and Sections 4 through 7 |
| NAC § 704.9522 | Measurement and verification protocol for energy efficiency and conservation measures: Duties of utility provider. 1. A utility provider shall propose a measurement and verification protocol for all energy efficiency and conservation measures submitted pursuant to NAC 704.9005 to 704.9525, inclusive. 2. The utility provider shall comply with and shall ensure that all energy efficiency and conservation contracts entered into by the utility provider comply with, the most recent measurement and verification protocol approved by the Commission. | Section 4, Sections 5 through 7 (programs' data sheets), and Technical Appendices DSM-05 through DSM-17 |
| Docket Nos. 10-10024 and 10-10025 ⁷ | Calculation of expected lost revenues generated by the portfolio broken down by individual programs. | Section 4 |
| Docket Nos. 12-06052 and 12-06053 ⁸ | Provide to the Regulatory Operations Staff ("Staff") and Bureau of Consumer Protection ("BCP") at time of filing all information and all supporting data upon which NV Energy relies to develop benefit/cost calculations related to DSM programs and lost revenue calculations for DSM programs. | Section 1 and Workpapers served on Staff and BCP concurrently with this instant filing |
| Docket Nos. 12-06052 and 12-06053 ⁹ | NV Energy shall include a discussion of, and support for, the development of load shapes (energy savings profiles). | Sections 4 through 7 and Technical Appendices DSM-05 through DSM-17 |
| Docket Nos. 12-06052 and 12-06053 ¹⁰ | NV Energy shall include documentation for all incremental cost calculations. | Sections 5 through 7 (programs' data sheets 'Input and Output Sheets' sections) |

⁷ May 23, 2011, Order at 68, para. 4.

⁸ December 24, 2012, Order at 191.

⁹ *Id.*

¹⁰ *Id.* at 191-92.

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| Regulatory Requirement | Description | Location of Provided Data |
|---|--|--|
| Docket Nos. 12-06052 and 12-06053 ¹¹ | NV Energy shall utilize the measure life as presented in the latest Measurement and Verification reports unless documentation is provided to support a changed measure life. | Sections 4 through 7 and Technical Appendices DSM-05 through DSM-17 |
| Docket Nos. 12-06052 and 12-06053 ¹² | NV Energy shall provide a discussion of, and support for, rebates and incentives offered for each appropriate program. | Sections 5 through 7 (programs' data sheets) |
| Docket Nos. 12-06052 and 12-06053 ¹³ | NV Energy shall include, for those programs that do not have an installed unit such as a refrigerator or pool pump but instead utilize an aggregate measure, a detailed discussion explaining and supporting the development of the aggregate measure. | Sections 5 through 7 (programs' data sheets) |
| Docket Nos. 12-06052 and 12-06053 ¹⁴ | NV Energy shall provide deemed savings on a per unit measure basis and present changes in Measurement and Verification verified deemed savings including the reasons behind the changes to future savings. | Sections 5 through 7 (programs' data sheets) |
| Docket Nos. 12-06052 and 12-06053 ¹⁵ | NV Energy shall present in its Demand Response data sheets, a residential section, a commercial section and a combined program section. | Section 4, Section 6 Residential DR Program (Build and Manage), and Section 7 Commercial DR Program (Build and Manage) |
| Docket Nos. 14-07007 and 14-07008 ¹⁶ | Companies shall provide a more detailed analysis of the program costs and kWh/kW savings for each company's respective Demand Response programs in future annual Demand Side Management update reports and Demand Side Plan section of triennial Integrated Resource Plan filings to include the breakout between optimization and demand events and between the build and manage components. | Section 6 Residential DR Program (Build and Manage) and Section 7 Commercial DR Program (Build and Manage) |
| Docket No. 19-07004 ¹⁷ | NV Energy shall work with BCP and other interested parties to develop a methodology to recommend for use by the Commission to determine the appropriate demand-side management goals for each triennial integrated resource plan. NV Energy will include an evaluation of the balance between short term rate impacts and long-term benefits from cost-effective demand-side management programs for setting demand-side management goals. NV Energy will use models, data, and results to assess the rate impacts associated with NV Energy's demand-side management portfolio, in a manner consistent with the integrated resource plan. Develop and test the methodology on a schedule allowing NV Energy to include analysis of the demand-side management portfolio in the next triennial integrated resource plan. | Technical Appendix DSM-25 and Testimony of Kimberly Lukasiak |

¹¹ *Id.* at 192.

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.* at 193.

¹⁶ November 24, 2014, Order at 6, para. 7.

¹⁷ Docket No. 19-07004, December 24, 2019, Order at 8-9, para. 6.

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Section 2 – 2020 Program Year and Prior Program Year Results

For NV Energy’s 2020 DSM portfolio, the Commission authorized 13 stand-alone programs for both Nevada Power and Sierra, unless specified, which are provided in Table DSM-5 below arranged in order of energy savings achieved:¹⁸

Table DSM-5: 2020 DSM Programs in Order of Verified Energy Savings

| Line No. | DSM Programs | Verified Energy Savings (kWh) |
|--|--|--------------------------------------|
| 1 | Commercial Services | 186,797,810 |
| 2 | Residential Lighting | 41,801,078 |
| 3 | Energy Smart Schools | 28,769,649 |
| 4 | Energy Reports | 22,867,783 |
| 5 | Residential Demand Response - Manage & Build [1] | 19,513,711 |
| 6 | Commercial Demand Response - Manage & Build [1] | 5,885,985 |
| 7 | Residential High Efficiency Air Conditioning [2] | 5,378,586 |
| 8 | Pool Pumps [2] | 3,872,180 |
| 9 | Direct Install | 771,154 |
| 10 | Energy Assessments | 599,648 |
| 11 | Energy Education | 504,226 |
| 12 | Low Income | 327,548 |
| 13 | Program Development [3] | 0 |
| NV Energy Portfolio Total Verified Energy Savings | | 317,089,358 |

[1] The DR programs design and approach vary from a standard energy efficiency program. A participant is fully active once the thermostat is installed or connected, the program then uses annual savings.

[2] The program is offered only in Nevada Power’s service territory.

[3] Energy (kWh) savings are not tracked because it is predicated on testing and trials of new ‘potential’ programs and/or technologies.

The results for NV Energy’s 2020 DSM program year provided lessons learned that aided in the design of programs for the action period, 2022 through 2024. Utilizing information from lessons learned along with stakeholder, customer, and contractor feedback, NV Energy worked to improve program performance and implement process improvements. During the 2020 program year, NV Energy continuously took corrective actions when appropriate to make enhancements for future years. Lessons learned are discussed in each program’s data sheet.

The Companies did not meet the 5 percent of the total spend of the portfolio on low-income customers due to several factors. COVID-19 and the late launch of the standalone Low Income program had the largest effect on the low-income spend. The standalone Low Income program did not launch until the third quarter of 2020 and manufacturing and delivery delays, due to COVID-19, did not allow for expected participation throughout the year, thus allowing for only 3 percent of the total DSM budget to be expended (\$1,139,310/\$42,984,734) on the Low Income program.

¹⁸ Docket No. 19-07004, December 24, 2019, Order at 3-5, para. 2-5

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In addition, other residential programs that low-income qualified customers could participate in, such as In-Home Assessments, Direct Install and Residential DR were suspended for three-plus months for COVID-19 safety. The methodology used to qualify customers for these other programs were to cross reference if they participated in the standalone Low Income program or participated in the low-income component of the Residential AC program. Due to these factors, the Companies expended 4 percent of the total DSM spend statewide (\$1,613,143/\$42,984,734) on low-income customers.

Summary of NV Energy's 2020 Program Year Results

Table DSM-6 below provides NV Energy's statewide 2020 reporting year results for the DSM portfolio expenditures of \$42,984,734 and verified energy savings achieved of 317,089,358 kWh, which equals 1.1 percent of energy savings to weather normalized retail sales.

Table DSM-7 below provides a detailed breakdown of NV Energy's statewide 2020 reporting year expenditures for each individual DSM program. The total DSM portfolio expenditures were 78 percent of the \$55 million authorized budget.

Table DSM-8 below provides NV Energy's statewide 2020 reporting year results by DSM program for verified demand kilowatt ("demand kW") savings, verified energy kilowatt-hours ("energy kWh") savings, weighted Effective Useful Life ("EUL"), and lifetime energy kWh savings. NV Energy was below its energy (kWh) and demand (kW) savings targets by 11 percent and 8 percent, respectively. The total energy savings for the 2020 program year equaled 89 percent of the 357,926,024 kWh target. The demand savings totaled 231,033 kW and were 92 percent of the 251,925 kW target.

Table DSM-9 below provides NV Energy's statewide 2020 reporting year results for DSM programs' NTRC and TRC test results. NV Energy's DSM programs portfolio NTRC and TRC values were calculated using the PortfolioPro financial model, which is described in Section 4. Each DSM program's 2020 output sheets are contained in Sections 5 through 7 and provide the five distinct cost-effectiveness tests, including the NTRC and TRC tests. NV Energy has a cost-effective portfolio as reflected in its overall NTRC ratio of 2.58 and net benefits of \$145.6 million for its 2020 portfolio of DSM programs.

In accordance with NAC § 704.9359, Table DSM-10 below provides NV Energy's statewide 2020 reporting year results for DSM programs' environmental benefits and provides an estimate of the reduction in emissions that will be realized by energy-efficient measures that were installed or adopted by customers.

Summary of Nevada Power's 2020 Program Year Results

Table DSM-6 below provides Nevada Power's 2020 reporting year results for the DSM portfolio expenditures of \$32,720,259 and achieved verified energy savings of 214,930,750 kWh, which represents 1.1 percent of weather normalized retail sales.

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Table DSM-7 below provides Nevada Power's 2020 reporting year results for DSM program expenditures. Expenditures remained within the authorized budget. The total Nevada Power DSM portfolio expenditures were 79 percent of the \$41.4 million authorized budget.

Table DSM-8 below provides Nevada Power's 2020 reporting year results by DSM program for verified demand kW savings, energy kWh savings, weighted EUL, and lifetime kWh savings. Nevada Power was below its energy (kWh) and demand (kW) savings targets by 19 percent and 7 percent, respectfully. Total energy (kWh) savings for the 2020 program were 81 percent of the 265,015,843 kWh target. The demand (kW) savings totaled 199,504 kW and were 93 percent of the 214,811 kW target.

Tables DSM-9 below provides Nevada Power's 2020 reporting year results for DSM programs' NTRC and TRC test results. Nevada Power's DSM program's NTRC and TRC values were calculated using the PortfolioPro financial model. Sections 5 through 7 contain each respective program's 2020 output sheets and provide the five distinct cost-effectiveness tests, including the NTRC and TRC tests for each individual program. Section 4 of this DSM Narrative provides a description of the PortfolioPro model and lists the key inputs used for the financial analysis. Nevada Power had a cost-effective portfolio as reflected in its overall NTRC ratio of 2.76 and net benefits of \$120.1 million for its DSM programs.

Table DSM-10 below provides Nevada Power's 2020 reporting year results for DSM programs' environment benefits and provides an estimate of the reduction in emissions that will be realized by energy-efficient measures that were installed or adopted by customers.

Summary of Sierra's 2020 Program Year Results

Table DSM-6 below provides Sierra's 2020 reporting year results for the DSM portfolio expenditures of \$10,264,476 and achieved verified energy savings of 102,158,608 kWh, which represents 1.1 percent of weather normalized retail sales.

Table DSM-7 below provides Sierra's 2020 reporting year results for DSM programs' expenditures. Expenditures remained within the authorized budget. The total DSM portfolio expenditures were 76 percent of the \$13.6 million authorized budget.

Table DSM-8 below provides Sierra's 2020 reporting year results by DSM program for verified demand kW savings, energy kWh savings, weighted EUL, and lifetime kWh savings. Sierra was above its energy (kWh) and below its demand (kW) savings targets by 10 percent and 15 percent, respectfully. Total energy (kWh) savings for the 2020 program were 110 percent of the 92,910,181 kWh target. The demand (kW) savings totaled 31,530 kW and were 85 percent of the 37,113 kW target.

Tables DSM-9 below provides Sierra's 2020 reporting year results for DSM programs' NTRC and TRC test results. Sierra's DSM programs' NTRC and TRC values were calculated using the PortfolioPro financial model. Sections 5 through 7 contain each respective program's 2020 output sheets and provide the five distinct cost-effectiveness tests, including the NTRC and TRC tests for

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each individual program. Section 4 of this DSM Narrative provides a description of the PortfolioPro model and lists the key inputs used for the financial analysis. Sierra had a cost-effective portfolio as reflected in its overall NTRC ratio of 2.07 and net benefits of \$25.5 million for its DSM programs.

Table DSM-10 below provides Sierra's 2020 reporting year results for DSM program environment benefits and provides an estimate of the reduction in emissions that will be realized by energy-efficient measures that were installed or adopted by customers.

Table DSM-6: 2020 DSM Portfolio Financial Results and Savings Achieved

| Nevada Power | 2020 |
|---|----------------|
| Actual Expenditures | \$32,720,259 |
| 2020 Retail Sales Target (kWh) | 19,400,367,112 |
| 1.1% Target (kWh) | 213,404,038 |
| Energy Savings Achieved (kWh) | 214,930,750 |
| % Energy Savings to Retail Sales | 1.1% |
| Sierra | |
| Actual Expenditures | \$10,264,476 |
| 2020 Retail Sales Target (kWh) | 9,332,961,000 |
| 1.1% Target (kWh) | 102,662,571 |
| Energy Savings Achieved (kWh) | 102,158,608 |
| % Energy Savings to Retail Sales | 1.1% |
| NV Energy | |
| Actual Expenditures | \$42,984,734 |
| 2020 Retail Sales Target (kWh) | 28,733,328,112 |
| 1.1% Target (kWh) | 316,066,609 |
| Energy Savings Achieved (kWh) | 317,089,358 |
| % Energy Savings to Retail Sales | 1.1% |

Table DSM-7: 2020 DSM Programs Financial Results

| Programs | Authorized Budget | Actual Expenditures | Variance Over (Under) % |
|--|--------------------------|----------------------------|--------------------------------|
| Nevada Power | | 2020 | |
| Energy Education | \$600,000 | \$231,532 | (61.4%) |
| Energy Reports | \$800,000 | \$563,940 | (29.5%) |
| Energy Assessments | \$2,110,000 | \$1,620,892 | (23.2%) |
| Program Development | \$200,000 | \$159,304 | (20.3%) |
| Outreach and Development Total | \$3,710,000 | \$2,575,668 | (30.6%) |
| Residential Lighting | \$1,840,000 | \$1,858,170 | 1.0% |
| Low Income | \$2,100,000 | \$883,035 | (58.0%) |
| Direct Install | \$500,000 | \$243,715 | (51.3%) |
| Residential Demand Response - Manage | \$6,000,000 | \$5,460,754 | (9.0%) |
| Residential Demand Response - Build | \$4,400,000 | \$3,360,364 | (23.6%) |
| Pool Pumps | \$1,150,000 | \$872,063 | (24.2%) |
| Residential High Efficiency Air Conditioning | \$4,000,000 | \$3,648,110 | (8.8%) |
| Home Services Total | \$19,990,000 | \$16,326,212 | (18.3%) |
| Energy Smart Schools | \$1,500,000 | \$1,314,037 | (12.4%) |
| Commercial Services | \$14,700,000 | \$11,777,030 | (19.9%) |
| Commercial Demand Response - Manage | \$650,000 | \$320,979 | (50.6%) |

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| Programs | Authorized Budget | Actual Expenditures | Variance Over (Under) % |
|--|--------------------------|----------------------------|--------------------------------|
| Commercial Demand Response - Build | \$850,000 | \$406,333 | (52.2%) |
| Business Services Total | \$17,700,000 | \$13,818,379 | (21.9%) |
| Nevada Power Portfolio Total | \$41,400,000 | \$32,720,259 | (21.0%) |
| Sierra | 2020 | | |
| Energy Education | \$475,000 | \$145,861 | (69.3%) |
| Energy Reports | \$500,000 | \$229,645 | (54.1%) |
| Energy Assessments | \$925,000 | \$676,501 | (26.9%) |
| Program Development | \$100,000 | \$80,182 | (19.8%) |
| Outreach and Development Total | \$2,000,000 | \$1,132,189 | (43.4%) |
| Residential Lighting | \$1,000,000 | \$791,368 | (20.9%) |
| Low Income [1] | \$700,000 | \$256,275 | (63.4%) |
| Direct Install | \$150,000 | \$86,117 | (42.6%) |
| Residential Demand Response - Manage | \$750,000 | \$619,335 | (17.4%) |
| Residential Demand Response - Build | \$1,600,000 | \$1,039,229 | (35.0%) |
| Home Services Total | \$4,200,000 | \$2,792,324 | (33.5%) |
| Energy Smart Schools | \$800,000 | \$824,436 | 3.1% |
| Commercial Services | \$5,900,000 | \$5,205,813 | (11.8%) |
| Commercial Demand Response - Manage | \$250,000 | \$132,779 | (46.9%) |
| Commercial Demand Response - Build | \$450,000 | \$176,934 | (60.7%) |
| Business Services Total | \$7,400,000 | \$6,339,962 | (14.3%) |
| Sierra Portfolio Total | \$13,600,000 | \$10,264,476 | (24.5%) |
| NV Energy | 2020 | | |
| Energy Education | \$1,075,000 | \$377,392 | (64.9%) |
| Energy Reports | \$1,300,000 | \$793,585 | (39.0%) |
| Energy Assessments | \$3,035,000 | \$2,297,393 | (24.3%) |
| Program Development | \$300,000 | \$239,487 | (20.2%) |
| Education Total | \$5,710,000 | \$3,707,857 | (35.1%) |
| Residential Lighting | \$2,840,000 | \$2,649,538 | (6.7%) |
| Low Income [1] | \$2,800,000 | \$1,139,310 | (59.3%) |
| Direct Install | \$650,000 | \$329,832 | (49.3%) |
| Residential Demand Response - Manage | \$6,750,000 | \$6,080,090 | (9.9%) |
| Residential Demand Response - Build | \$6,000,000 | \$4,399,593 | (26.7%) |
| Pool Pumps | \$1,150,000 | \$872,063 | (24.2%) |
| Residential High Efficiency Air Conditioning | \$4,000,000 | \$3,648,110 | (8.8%) |
| Home Services Total | \$24,190,000 | \$19,118,536 | (21.0%) |
| Energy Smart Schools | \$2,300,000 | \$2,138,474 | (7.0%) |
| Commercial Services | \$20,600,000 | \$16,982,843 | (17.6%) |
| Commercial Demand Response - Manage | \$900,000 | \$453,758 | (49.6%) |
| Commercial Demand Response - Build | \$1,300,000 | \$583,267 | (55.1%) |
| Business Services Total | \$25,100,000 | \$20,158,341 | (19.7%) |
| NV Energy Portfolio Total [1] | \$55,000,000 | \$42,984,734 | (21.8%) |

[1] NV Energy has attributed low-income expenses for qualified participants in other residential programs such as, AC tune-ups, Residential DR (thermostats), Energy Education Kits, Direct Install, In-home Energy Assessments, Online Energy Assessments, and Pool Pumps Programs. This analysis resulted in a total of \$1,348,175 in low-income expenditures for a total of \$2,149,237 for NV Energy or 4 percent of the DSM Portfolio.

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Table DSM-8: 2020 DSM Programs Demand and Energy Savings Results

| Programs | Demand kW | | | Energy kWh | | | | |
|--|---------------------|-------------------------|-------------------------|--------------------|-------------------------|-------------------------|-------------|----------------------|
| | Target | Verified Demand Savings | Variance Over (Under) % | Target | Verified Energy Savings | Variance Over (Under) % | EUL | Lifetime Savings [1] |
| Nevada Power | Nevada Power | | | | | | | |
| Energy Education | 23 | 35 | 53.5% | 240,000 | 316,205 | 31.8% | 10.5 | 3,307,504 |
| Energy Reports | 5,131 | 6,430 | 25.3% | 23,823,100 | 16,367,498 | (31.3%) | 1.0 | 16,367,498 |
| Energy Assessments | 1,961 | 212 | (89.2%) | 6,407,600 | 539,323 | (91.6%) | 1.1 | 574,165 |
| Program Development [2] | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 0.0 | 0 |
| Outreach and Development Total | 7,115 | 6,677 | (6.2%) | 30,470,700 | 17,223,026 | (43.5%) | 1.2 | 20,249,167 |
| Residential Lighting | 2,015 | 2,858 | 41.8% | 20,444,444 | 27,662,471 | 35.3% | 8.4 | 232,364,756 |
| Low Income | 184 | 30 | (83.6%) | 1,653,543 | 269,145 | (83.7%) | 9.2 | 2,476,134 |
| Direct Install | 119 | 58 | (51.3%) | 1,219,512 | 634,394 | (48.0%) | 4.5 | 2,854,773 |
| Residential Demand Response – Manage [3] | 140,180 | 145,617 | 3.9% | 21,428,571 | 17,938,697 | (16.3%) | 5.3 | 94,357,546 |
| Residential Demand Response – Build [3] | 11,493 | 5,305 | (53.8%) | 3,142,857 | 745,643 | (76.3%) | 10.0 | 7,456,430 |
| Pool Pumps | 2,320 | 1,390 | (40.1%) | 7,666,667 | 3,872,180 | (49.5%) | 10.0 | 38,721,800 |
| Residential High Efficiency Air Conditioning | 4,439 | 3,126 | (29.6%) | 6,666,667 | 5,378,586 | (19.3%) | 18.2 | 97,728,908 |
| Home Services Total | 160,749 | 158,385 | (1.5%) | 62,222,262 | 56,501,116 | (9.2%) | 8.4 | 475,960,347 |
| Energy Smart Schools | 2,517 | 5,358 | 112.8% | 11,450,382 | 21,465,369 | 87.5% | 3.2 | 68,689,181 |
| Commercial Services | 20,934 | 14,769 | (29.4%) | 154,830,000 | 114,451,032 | (26.1%) | 12.1 | 1,384,857,487 |
| Commercial Demand Response – Manage [3] | 19,065 | 14,074 | (26.2%) | 6,000,000 | 5,285,258 | (11.9%) | 6.1 | 32,240,074 |
| Commercial Demand Response – Build [3] | 4,430 | 241 | (94.6%) | 42,500 | 4,949 | (88.4%) | 10.0 | 49,490 |
| Business Services Total | 46,947 | 34,442 | (26.6%) | 172,322,882 | 141,206,608 | (18.1%) | 10.5 | 1,485,836,232 |
| Nevada Power Total | 214,811 | 199,504 | (7.1%) | 265,015,843 | 214,930,750 | (18.9%) | 9.2 | 1,982,045,746 |
| Sierra | | | | | | | | |
| Energy Education | 13 | 21 | 64.7% | 120,000 | 188,021 | 56.7% | 10.6 | 1,994,903 |
| Energy Reports | 2,358 | 2,192 | (7.0%) | 7,893,100 | 6,500,285 | (17.6%) | 1.0 | 6,500,285 |
| Energy Assessments | 981 | 20 | (98.0%) | 2,030,000 | 60,325 | (97.0%) | 1.1 | 65,255 |
| Program Development | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 0.0 | 0 |
| Education Total | 3,352 | 2,233 | (33.4%) | 10,043,100 | 6,748,631 | (32.8%) | 1.3 | 8,560,442 |
| Residential Lighting | 1,041 | 1,461 | 40.4% | 10,000,000 | 14,138,607 | 41.4% | 8.2 | 115,936,577 |
| Low Income | 63 | 7 | (89.5%) | 555,556 | 58,403 | (89.5%) | 9.1 | 531,467 |
| Direct Install | 36 | 14 | (61.3%) | 347,226 | 136,760 | (60.6%) | 6.2 | 847,912 |
| Residential Demand Response – Manage [3] | 12,026 | 12,251 | 1.9% | 1,500,000 | 697,500 | (53.5%) | 7.3 | 5,070,825 |
| Residential Demand Response – Build [3] | 2,518 | 1,244 | (50.6%) | 401,003 | 131,871 | (67.1%) | 10.0 | 1,318,710 |
| Home Services Total | 15,684 | 14,977 | (4.5%) | 12,803,784 | 15,163,141 | 18.4% | 8.2 | 123,705,492 |
| Energy Smart Schools | 1,124 | 1,272 | 13.2% | 7,272,727 | 7,304,280 | 0.4% | 12.0 | 87,651,360 |
| Commercial Services | 11,382 | 9,930 | (12.8%) | 62,328,070 | 72,346,778 | 16.1% | 13.3 | 962,212,147 |
| Commercial Demand Response - Manage | 5,105 | 3,017 | (40.9%) | 350,000 | 589,670 | 68.5% | 6.6 | 3,891,822 |
| Commercial Demand Response - Build | 466 | 101 | (78.3%) | 112,500 | 6,108 | (94.6%) | 10.0 | 61,080 |
| Business Services Total | 18,077 | 14,320 | (20.8%) | 70,063,297 | 80,246,836 | 14.5% | 13.1 | 1,053,816,409 |
| Sierra Total | 37,113 | 31,530 | (15.0%) | 92,910,181 | 102,158,608 | 10.0% | 11.6 | 1,186,082,343 |
| NV Energy | | | | | | | | |
| Energy Education | 36 | 56 | 57.5% | 360,000 | 504,226 | 40.1% | 10.5 | 5,302,407 |
| Energy Reports | 7,489 | 8,622 | 15.1% | 31,716,199 | 22,867,783 | (27.9%) | 1.0 | 22,867,783 |

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| Programs | Demand kW | | | Energy kWh | | | | |
|--|----------------|-------------------------|-------------------------|--------------------|-------------------------|-------------------------|-------------|----------------------|
| | Target | Verified Demand Savings | Variance Over (Under) % | Target | Verified Energy Savings | Variance Over (Under) % | EUL | Lifetime Savings [1] |
| Energy Assessments | 2,942 | 232 | (92.1%) | 8,437,600 | 599,648 | (92.9%) | 1.1 | 639,419 |
| Program Development | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 0.0 | 0 |
| Outreach and Development Total | 10,467 | 8,910 | (14.9%) | 40,513,799 | 23,971,657 | (40.8%) | 1.2 | 28,809,609 |
| Residential Lighting | 3,056 | 4,319 | 41.3% | 30,444,444 | 41,801,078 | 37.3% | 8.3 | 348,301,334 |
| Low Income | 248 | 37 | (85.1%) | 2,209,099 | 327,548 | (85.2%) | 9.2 | 3,007,601 |
| Direct Install | 155 | 72 | (53.6%) | 1,566,739 | 771,154 | (50.8%) | 4.8 | 3,702,685 |
| Residential Demand Response – Manage [3] | 152,206 | 157,868 | 3.7% | 22,928,571 | 18,636,197 | (18.7%) | 5.3 | 99,428,371 |
| Residential Demand Response – Build [3] | 14,011 | 6,549 | (53.3%) | 3,543,860 | 877,514 | (75.2%) | 10.0 | 8,775,140 |
| Pool Pumps | 2,320 | 1,390 | (40.1%) | 7,666,667 | 3,872,180 | (49.5%) | 10.0 | 38,721,800 |
| Residential High Efficiency Air Conditioning | 4,439 | 3,126 | (29.6%) | 6,666,667 | 5,378,586 | (19.3%) | 18.2 | 97,728,908 |
| Home Services Total | 176,434 | 173,361 | (1.7%) | 75,026,046 | 71,664,257 | (4.5%) | 8.4 | 599,665,839 |
| Energy Smart Schools | 3,641 | 6,630 | 82.1% | 18,723,109 | 28,769,649 | 53.7% | 5.4 | 156,340,541 |
| Commercial Services | 32,316 | 24,699 | (23.6%) | 217,158,070 | 186,797,810 | (14.0%) | 12.6 | 2,347,069,635 |
| Commercial Demand Response - Manage | 24,170 | 17,091 | (29.3%) | 6,350,000 | 5,874,928 | (7.5%) | 6.2 | 36,131,896 |
| Commercial Demand Response - Build | 4,896 | 342 | (93.0%) | 155,000 | 11,057 | (92.9%) | 10.0 | 110,570 |
| Business Services Total | 65,024 | 48,762 | (25.0%) | 242,386,179 | 221,453,444 | (8.6%) | 11.5 | 2,539,652,641 |
| NV Energy Total | 251,925 | 231,033 | (8.3%) | 357,926,024 | 317,089,358 | (11.4%) | 10.0 | 3,168,128,089 |

[1] The total calculated value for lifetime energy savings is (verified energy savings * EUL). The M&V Reports present only two decimal places and the total lifetime energy savings calculated for presentation in this instant filing may not tie due to rounding.

[2] Energy (kWh) and demand (kW) savings are not tracked for this program, because it is predicated on testing and trials of new potential programs and/or technologies.

[3] The DR programs design and approach vary from a standard energy efficiency program. A participant is fully active once the thermostat is installed or connected, the program then uses annual savings.

Table DSM-9: 2020 DSM Programs NTRC and TRC Benefits/Costs Results

| Programs | Benefits | Costs | Net Benefits | NTRC B/C Ratio | Benefits | Costs | Net Benefits | TRC B/C Ratio |
|---------------------------------------|--------------------|--------------------|--------------------|----------------|--------------------|--------------------|----------------------|---------------|
| Nevada Power | NTRC | | | | TRC | | | |
| Energy Education | \$136,836 | \$231,532 | (\$94,696) | 0.59 | \$109,918 | \$231,532 | (\$121,614) | 0.47 |
| Energy Reports | \$1,291,049 | \$563,940 | \$727,109 | 2.29 | \$1,122,651 | \$563,940 | \$558,711 | 1.99 |
| Energy Assessments | \$82,862 | \$1,620,892 | (\$1,538,030) | 0.05 | \$72,006 | \$1,620,892 | (\$1,548,886) | 0.04 |
| Program Development | \$0 | \$0 | \$0 | 0.00 | \$0 | \$0 | \$0 | 0.00 |
| Outreach and Development Total | \$1,510,747 | \$2,416,364 | (\$905,617) | 0.63 | \$1,304,574 | \$2,416,364 | (\$1,111,790) | 0.54 |
| Residential Lighting | \$5,409,399 | \$3,482,651 | \$1,926,747 | 1.55 | \$4,703,825 | \$3,482,651 | \$1,221,174 | 1.35 |
| Low Income | \$103,464 | \$883,035 | (\$779,572) | 0.12 | \$82,771 | \$883,035 | (\$800,264) | 0.09 |
| Direct Install | \$90,745 | \$243,715 | (\$152,970) | 0.37 | \$78,865 | \$243,715 | (\$164,849) | 0.32 |
| Residential Demand Response - Manage | \$104,449,844 | \$19,024,172 | \$85,425,672 | 5.49 | \$90,520,596 | \$19,024,172 | \$71,496,424 | 4.76 |
| Residential Demand Response - Build | \$6,860,562 | \$4,267,334 | \$2,593,228 | 1.61 | \$5,945,649 | \$4,267,334 | \$1,678,315 | 1.39 |
| Pool Pumps | \$1,874,531 | \$1,450,401 | \$424,130 | 1.29 | \$1,629,119 | \$1,450,401 | \$178,718 | 1.12 |

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a as NV Energy
Combined DSM Action Plan

| Programs | Benefits | Costs | Net Benefits | NTRC B/C Ratio | Benefits | Costs | Net Benefits | TRC B/C Ratio |
|--|----------------------|---------------------|----------------------|-------------------|----------------------|---------------------|----------------------|------------------|
| Residential High Efficiency Air Conditioning | \$5,901,368 | \$5,988,112 | (\$86,744) | 0.99 | \$5,124,451 | \$5,988,112 | (\$863,661) | 0.86 |
| Home Services Total | \$124,689,912 | \$35,339,420 | \$89,350,492 | 3.53 | \$108,085,277 | \$35,339,420 | \$72,745,857 | 3.06 |
| Energy Smart Schools | \$2,466,254 | \$2,500,434 | (\$34,180) | 0.99 | \$2,242,049 | \$2,500,434 | (\$258,385) | 0.90 |
| Commercial Services | \$47,859,853 | \$25,916,944 | \$21,942,909 | 1.85 | \$43,508,957 | \$25,916,944 | \$17,592,013 | 1.68 |
| Commercial Demand Response - Manage | \$11,381,125 | \$1,489,891 | \$9,891,233 | 7.64 | \$10,346,477 | \$1,489,891 | \$8,856,586 | 6.94 |
| Commercial Demand Response - Build | \$281,236 | \$399,898 | (\$118,662) | 0.70 | \$255,669 | \$399,898 | (\$144,229) | 0.64 |
| Business Services Total | \$61,988,467 | \$30,307,167 | \$31,681,300 | 2.05 | \$56,353,152 | \$30,307,167 | \$26,045,984 | 1.86 |
| Nevada Power Total | \$188,189,126 | \$68,062,951 | \$120,126,175 | 2.76 | \$165,743,003 | \$68,062,951 | \$97,680,052 | 2.44 |
| Sierra | NTRC | | | | TRC | | | |
| Energy Education | \$82,021 | \$145,861 | (\$63,840) | 0.56 | \$68,593 | \$145,861 | (\$77,268) | 0.47 |
| Energy Reports | \$481,046 | \$229,645 | \$251,401 | 2.09 | \$418,301 | \$229,645 | \$188,656 | 1.82 |
| Energy Assessments | \$8,699 | \$676,500 | (\$667,801) | 0.01 | \$7,563 | \$676,500 | (\$668,937) | 0.01 |
| Program Development | \$0 | \$0 | \$0 | 0.00 | \$0 | \$0 | \$0 | 0.00 |
| Outreach and Development Total | \$571,766 | \$1,052,006 | (\$480,240) | 0.54 | \$494,457 | \$1,052,006 | (\$557,548) | 0.47 |
| Residential Lighting | \$2,601,820 | \$1,433,665 | \$1,168,155 | 1.81 | \$2,262,452 | \$1,433,665 | \$828,787 | 1.58 |
| Low Income | \$23,006 | \$256,275 | (\$233,269) | 0.09 | \$18,405 | \$256,275 | (\$237,870) | 0.07 |
| Direct Install | \$29,348 | \$86,117 | (\$56,769) | 0.34 | \$25,516 | \$86,117 | (\$60,601) | 0.30 |
| Residential Demand Response - Manage | \$12,378,420 | \$3,464,760 | \$8,913,660 | 3.57 | \$10,761,559 | \$3,464,760 | \$7,296,799 | 3.11 |
| Residential Demand Response - Build | \$1,680,603 | \$1,430,187 | \$250,416 | 1.18 | \$1,461,084 | \$1,430,187 | \$30,897 | 1.02 |
| Home Services Total | \$16,713,196 | \$6,671,004 | \$10,042,193 | 2.51 | \$14,529,016 | \$6,671,004 | \$7,858,012 | 2.18 |
| Energy Smart Schools | \$2,033,499 | \$3,074,310 | (\$1,040,811) | 0.66 | \$1,848,635 | \$3,074,310 | (\$1,225,675) | 0.60 |
| Commercial Services | \$27,086,505 | \$12,185,395 | \$14,901,110 | 2.22 | \$24,624,096 | \$12,185,395 | \$12,438,701 | 2.02 |
| Commercial Demand Response - Manage | \$2,784,446 | \$650,052 | \$2,134,394 | 4.28 | \$2,531,315 | \$650,052 | \$1,881,263 | 3.89 |
| Commercial Demand Response - Build | \$121,403 | \$197,626 | (\$76,224) | 0.61 | \$110,366 | \$197,626 | (\$87,260) | 0.56 |
| Business Services Total | \$32,025,853 | \$16,107,383 | \$15,918,469 | 1.99 | \$29,114,412 | \$16,107,383 | \$13,007,028 | 1.81 |
| Sierra Total | \$49,310,815 | \$23,830,393 | \$25,480,422 | 2.07 | \$44,137,884 | \$23,830,393 | \$20,307,492 | 1.85 |
| NV Energy | NTRC | | | | TRC | | | |
| Energy Education | \$218,857 | \$377,392 | (\$158,535) | 0.58 | \$178,510 | \$377,392 | (\$198,882) | 0.47 |
| Energy Reports | \$1,772,095 | \$793,585 | \$978,510 | 2.23 | \$1,540,952 | \$793,585 | \$747,367 | 1.94 |
| Energy Assessments | \$91,561 | \$2,297,392 | (\$2,205,831) | 0.04 | \$79,569 | \$2,297,392 | (\$2,217,823) | 0.03 |
| Program Development | \$0 | \$0 | \$0 | 0.00 | \$0 | \$0 | \$0 | 0.00 |
| Outreach and Development Total | \$2,082,513 | \$3,468,369 | (\$1,385,856) | 0.60 | \$1,799,031 | \$3,468,369 | (\$1,669,338) | 0.52 |
| Residential Lighting | \$8,011,218 | \$4,916,316 | \$3,094,902 | 1.63 | \$6,966,277 | \$4,916,316 | \$2,049,961 | 1.42 |
| Low Income | \$126,470 | \$1,139,310 | (\$1,012,841) | 0.11 | \$101,176 | \$1,139,310 | (\$1,038,135) | 0.09 |
| Direct Install | \$120,093 | \$329,832 | (\$209,739) | 0.36 | \$104,381 | \$329,832 | (\$225,450) | 0.32 |
| Residential Demand Response - Manage | \$116,828,264 | \$22,488,933 | \$94,339,332 | 5.19 | \$101,282,156 | \$22,488,933 | \$78,793,223 | 4.50 |
| Residential Demand Response - Build | \$8,541,164 | \$5,697,520 | \$2,843,644 | 1.50 | \$7,406,733 | \$5,697,520 | \$1,709,212 | 1.30 |
| Pool Pumps | \$1,874,531 | \$1,450,401 | \$424,130 | 1.29 | \$1,629,119 | \$1,450,401 | \$178,718 | 1.12 |
| Residential High Efficiency Air Conditioning | \$5,901,368 | \$5,988,112 | (\$86,744) | 0.99 | \$5,124,451 | \$5,988,112 | (\$863,661) | 0.86 |
| Home Services Total | \$141,403,108 | \$42,010,424 | \$99,392,685 | 3.37 | \$122,614,293 | \$42,010,424 | \$80,603,869 | 2.92 |
| Energy Smart Schools | \$4,499,753 | \$5,574,744 | (\$1,074,991) | 0.81 | \$4,090,684 | \$5,574,744 | (\$1,484,060) | 0.73 |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a as NV Energy
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| Programs | Benefits | Costs | Net Benefits | NTRC B/C Ratio | Benefits | Costs | Net Benefits | TRC B/C Ratio |
|--|----------------------|---------------------|----------------------|-------------------|----------------------|---------------------|----------------------|------------------|
| Commercial Services | \$74,946,358 | \$38,102,339 | \$36,844,019 | 1.97 | \$68,133,052 | \$38,102,339 | \$30,030,713 | 1.79 |
| Commercial Demand Response - Manage | \$14,165,571 | \$2,139,943 | \$12,025,627 | 6.62 | \$12,877,791 | \$2,139,943 | \$10,737,848 | 6.02 |
| Commercial Demand Response - Build | \$402,639 | \$597,525 | (\$194,886) | 0.67 | \$366,035 | \$597,525 | (\$231,490) | 0.61 |
| Business Services Total | \$94,014,320 | \$46,414,551 | \$47,599,769 | 2.03 | \$85,467,563 | \$46,414,551 | \$39,053,012 | 1.84 |
| NV Energy Total | \$237,499,941 | \$91,893,344 | \$145,606,597 | 2.58 | \$209,880,888 | \$91,893,344 | \$117,987,544 | 2.28 |

[1] Energy (kWh) and demand (kW) savings are not tracked for this program, because it is predicated on testing and trials of new potential programs and/or technologies.

Table DSM-10: 2020 DSM Programs Environmental Benefits

| Programs | Sulfur Dioxide (lbs.) | Carbon Dioxide (lbs.) | Carbon Monoxide (lbs.) | Particulate Matter (lbs.) | Volatile Organic Compound (lbs.) | Nitrogen Oxides (lbs.) | Heavy Metals (lbs.) | Water Savings (Gallons) |
|--|-----------------------------|-----------------------------|------------------------------|---------------------------------|---|------------------------------|---------------------------|-------------------------------|
| Nevada Power | 2020 | | | | | | | |
| Energy Education | 9 | 220,101 | 9 | 9 | 0 | 41 | 3 | 14,394 |
| Energy Reports | 491 | 11,392,924 | 491 | 491 | 0 | 2,128 | 147 | 745,049 |
| Energy Assessments | 16 | 375,407 | 16 | 16 | 0 | 70 | 5 | 24,550 |
| Program Development [1] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Outreach and Development Total | 517 | 11,988,432 | 517 | 517 | 0 | 2,239 | 155 | 783,992 |
| Residential Lighting | 830 | 19,255,016 | 830 | 830 | 0 | 3,596 | 249 | 1,259,196 |
| Low Income | 8 | 187,344 | 8 | 8 | 0 | 35 | 2 | 12,251 |
| Direct Install | 19 | 441,583 | 19 | 19 | 0 | 82 | 6 | 28,878 |
| Residential Demand Response - Manage | 538 | 12,486,589 | 538 | 538 | 0 | 2,332 | 161 | 816,569 |
| Residential Demand Response - Build | 22 | 519,020 | 22 | 22 | 0 | 97 | 7 | 33,942 |
| Pool Pumps | 116 | 2,695,308 | 116 | 116 | 0 | 503 | 35 | 176,262 |
| Residential High Efficiency Air Conditioning | 161 | 3,743,872 | 161 | 161 | 0 | 699 | 48 | 244,833 |
| Home Services Total | 1,695 | 39,328,732 | 1,695 | 1,695 | 0 | 7,345 | 509 | 2,571,931 |
| Energy Smart Schools | 644 | 14,941,399 | 644 | 644 | 0 | 2,790 | 193 | 977,104 |
| Commercial Services | 3,434 | 79,665,930 | 3,434 | 3,434 | 0 | 14,879 | 1,030 | 5,209,811 |
| Commercial Demand Response - Manage | 159 | 3,678,910 | 159 | 159 | 0 | 687 | 48 | 240,585 |
| Commercial Demand Response - Build | 0 | 3,445 | 0 | 0 | 0 | 1 | 0 | 225 |
| Business Services Total | 4,236 | 98,289,684 | 4,236 | 4,236 | 0 | 18,357 | 1,271 | 6,427,725 |
| Nevada Power Portfolio Total | 6,448 | 149,606,847 | 6,448 | 6,448 | 0 | 27,941 | 1,934 | 9,783,648 |
| Sierra | 2020 | | | | | | | |
| Energy Education | 94 | 148,085 | 58 | 8 | 0 | 109 | 2 | 76,100 |
| Energy Reports | 3,250 | 5,119,624 | 2,015 | 260 | 0 | 3,770 | 59 | 2,630,925 |
| Energy Assessments | 30 | 47,512 | 19 | 2 | 0 | 35 | 1 | 24,416 |
| Program Development [1] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Outreach and Development Total | 3,374 | 5,315,222 | 2,092 | 270 | 0 | 3,914 | 61 | 2,731,441 |

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| Programs | Sulfur Dioxide (lbs.) | Carbon Dioxide (lbs.) | Carbon Monoxide (lbs.) | Particulate Matter (lbs.) | Volatile Organic Compound (lbs.) | Nitrogen Oxides (lbs.) | Heavy Metals (lbs.) | Water Savings (Gallons) |
|--|-----------------------|-----------------------|------------------------|---------------------------|----------------------------------|------------------------|---------------------|-------------------------|
| Residential Lighting | 7,069 | 11,135,567 | 4,383 | 566 | 0 | 8,200 | 127 | 5,722,460 |
| Low Income | 29 | 45,998 | 18 | 2 | 0 | 34 | 1 | 23,638 |
| Direct Install | 68 | 107,712 | 42 | 5 | 0 | 79 | 1 | 55,352 |
| Residential Demand Response - Manage | 349 | 549,351 | 216 | 28 | 0 | 405 | 6 | 282,306 |
| Residential Demand Response - Build | 66 | 103,862 | 41 | 5 | 0 | 76 | 1 | 53,373 |
| Home Services Total | 7,582 | 11,942,490 | 4,701 | 607 | 0 | 8,795 | 136 | 6,137,130 |
| Energy Smart Schools | 3,652 | 5,752,851 | 2,264 | 292 | 0 | 4,236 | 66 | 2,956,334 |
| Commercial Services | 36,173 | 56,980,322 | 22,428 | 2,894 | 0 | 41,961 | 651 | 29,281,635 |
| Commercial Demand Response - Manage | 295 | 464,424 | 183 | 24 | 0 | 342 | 5 | 238,663 |
| Commercial Demand Response - Build | 3 | 4,811 | 2 | 0 | 0 | 4 | 0 | 2,472 |
| Business Services Total | 40,123 | 63,202,408 | 24,877 | 3,210 | 0 | 46,543 | 722 | 32,479,104 |
| Sierra Portfolio Total | 51,079 | 80,460,120 | 31,669 | 4,086 | 0 | 59,252 | 919 | 41,347,675 |
| NV Energy | 2020 | | | | | | | |
| Energy Education | 103 | 368,186 | 68 | 17 | 0 | 150 | 5 | 90,493 |
| Energy Reports | 3,741 | 16,512,549 | 2,506 | 751 | 0 | 5,898 | 206 | 3,375,974 |
| Energy Assessments | 46 | 422,919 | 35 | 19 | 0 | 105 | 5 | 48,966 |
| Program Development [1] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Outreach and Development Total | 3,891 | 17,303,653 | 2,609 | 787 | 0 | 6,153 | 216 | 3,515,433 |
| Residential Lighting | 7,899 | 30,390,583 | 5,213 | 1,395 | 0 | 11,797 | 376 | 6,981,655 |
| Low Income | 37 | 233,342 | 26 | 10 | 0 | 69 | 3 | 35,890 |
| Direct Install | 87 | 549,295 | 61 | 25 | 0 | 162 | 7 | 84,230 |
| Residential Demand Response - Manage | 887 | 13,035,940 | 754 | 566 | 0 | 2,737 | 168 | 1,098,876 |
| Residential Demand Response - Build | 88 | 622,881 | 63 | 28 | 0 | 173 | 8 | 87,315 |
| Pool Pumps | 116 | 2,695,308 | 116 | 116 | 0 | 503 | 35 | 176,262 |
| Residential High Efficiency Air Conditioning | 161 | 3,743,872 | 161 | 161 | 0 | 699 | 48 | 244,833 |
| Home Services Total | 9,277 | 51,271,222 | 6,396 | 2,302 | 0 | 16,140 | 645 | 8,709,060 |
| Energy Smart Schools | 4,296 | 20,694,250 | 2,908 | 936 | 0 | 7,027 | 259 | 3,933,438 |
| Commercial Services | 39,607 | 136,646,252 | 25,861 | 6,327 | 0 | 56,840 | 1,681 | 34,491,446 |
| Commercial Demand Response - Manage | 453 | 4,143,334 | 341 | 182 | 0 | 1,029 | 53 | 479,248 |
| Commercial Demand Response - Build | 3 | 8,256 | 2 | 0 | 0 | 4 | 0 | 2,697 |
| Business Services Total | 44,360 | 161,492,092 | 29,113 | 7,446 | 0 | 64,900 | 1,993 | 38,906,829 |
| NV Energy Total | 57,527 | 230,066,967 | 38,117 | 10,534 | 0 | 87,193 | 2,854 | 51,131,323 |

[1] Energy (kWh) and demand (kW) savings are not tracked for this program, because it is predicated on testing and trials of new potential programs and/or technologies.

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Summary of Prior Program Years

Table DSM-11 below provides, for the last 10 years, energy and demand savings, total and DR peak reductions, annual total and DR expenditures, and the percentage of energy savings to retail sales for Nevada Power's, Sierra's, and combined NV Energy's DSM portfolios.

Table DSM-11: 2011-2020 DSM Programs 10-Year Historical Performance

| Description | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Nevada Power | | | | | | | | | | |
| Total Energy Savings (MWh) | 220,717 | 146,407 | 137,221 | 174,875 | 197,532 | 164,394 | 191,058 | 155,631 | 232,653 | 214,931 |
| DR Energy Savings [1] | 1,303 | 2,131 | 13,418 | 12,095 | 26,917 | 26,403 | 32,402 | 25,975 | 28,368 | 23,975 |
| Total Peak Reduction [1] | 170 | 158 | 202 | 220 | 234 | 242 | 248 | 198 | 195 | 200 |
| DR Peak Reduction [1] | 136 | 134 | 179 | 191 | 206 | 217 | 224 | 183 | 159 | 165 |
| Expenditures (\$000) | \$38,863 | \$33,347 | \$34,373 | \$41,750 | \$36,165 | \$38,309 | \$39,390 | 34,256 | \$33,197 | \$32,720 |
| DR Expenditures (\$000) | \$12,835 | \$10,695 | \$15,030 | \$14,850 | \$14,161 | \$13,851 | \$15,235 | \$15,051 | \$11,127 | \$9,548 |
| Energy Savings [2] | 1.1% | 0.7% | 0.7% | 0.9% | 0.9% | 0.8% | 0.9% | 0.8% | 1.2% | 1.1% |
| Sierra | | | | | | | | | | |
| Total Energy Savings (MWh) | 57,474 | 36,065 | 37,976 | 53,831 | 48,371 | 61,120 | 56,367 | 60,356 | 94,562 | 102,159 |
| DR Energy Savings [1] | 0 | 18 | 26 | 1,427 | 969 | 1,623 | 2,310 | 3,196 | 3,259 | 1,425 |
| Total Peak Reduction [1] | 8 | 6 | 5 | 11 | 16 | 20 | 25 | 26 | 30 | 32 |
| DR Peak Reduction [1] | 0 | 0 | 0 | 3 | 9 | 11 | 18 | 19 | 17 | 17 |
| Expenditures (\$000) | \$6,307 | \$5,319 | \$5,018 | \$7,125 | \$9,340 | \$10,680 | \$10,960 | \$11,928 | \$11,361 | \$10,264 |
| DR Expenditures (\$000) | \$118 | \$3 | \$627 | \$1,139 | \$2,834 | \$2,914 | \$3,940 | \$4,593 | \$2,852 | \$1,968 |
| Energy Savings [2] | 0.8% | 0.5% | 0.5% | 0.7% | 0.6% | 0.7% | 0.7% | 0.7% | 1.0% | 1.1% |
| NV Energy | | | | | | | | | | |
| Total Energy Savings (MWh) | 278,191 | 182,472 | 175,197 | 228,706 | 245,903 | 225,515 | 247,425 | 215,987 | 327,215 | 317,089 |
| DR Energy Savings [1] | 1,303 | 2,149 | 13,444 | 13,522 | 27,886 | 28,026 | 34,712 | 29,171 | 31,627 | 25,400 |
| Total Peak Reduction [1] | 178 | 164 | 207 | 231 | 250 | 262 | 273 | 224 | 225 | 231 |
| DR Peak Reduction [1] | 136 | 134 | 179 | 194 | 215 | 228 | 242 | 201 | 176 | 182 |
| Expenditures (\$000) | \$45,170 | \$38,665 | \$39,391 | \$48,875 | \$45,505 | \$48,989 | \$50,350 | \$46,184 | \$44,558 | \$42,985 |
| DR Expenditures (\$000) | \$12,954 | \$10,698 | \$15,657 | \$15,989 | \$16,995 | \$16,765 | \$19,175 | \$19,644 | \$13,979 | \$11,517 |
| Energy Savings [2] | 1.0% | 0.6% | 0.6% | 0.8% | 0.8% | 0.8% | 0.9% | 0.8% | 1.1% | 1.1% |

[1] Shown in megawatts ("MW").

[2] Percent of weather-normalized retail sales.

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Section 3 – 2021 Program Year Goals and Targets

For the 2021 program year, the Commission authorized 13 DSM programs for both Nevada Power and Sierra, unless specified, which are provided in Table DSM-12 below in order of energy savings targeted. The overall 2021 DSM Portfolio is presented for context and bridges the gap between the historical and action plan periods. Table DSM-13 provides the 2021 authorized DSM program budgets, demand (kW) and energy (kWh) saving goals.¹⁹

Table DSM-12: 2021 DSM Programs in Order of Target Energy Savings

| Line No. | NV Energy Program Portfolio | Target Energy Savings (kWh) |
|----------------------------------|--|-----------------------------|
| 1 | Commercial Services | 214,764,000 |
| 2 | Residential Demand Response - Manage and Build | 29,000,000 |
| 3 | Residential Lighting | 23,000,000 |
| 4 | Energy Smart Schools | 21,000,000 |
| 5 | Energy Reports | 16,000,000 |
| 6 | Energy Assessments | 10,230,000 |
| 7 | Commercial Demand Response - Manage and Build | 6,708,000 |
| 8 | Residential High Efficiency Air Conditioning [1] | 5,400,000 |
| 9 | Pool Pumps [1] | 2,625,000 |
| 11 | Low Income | 2,100,000 |
| 10 | Direct Install | 2,077,129 |
| 12 | Energy Education | 360,000 |
| 13 | Program Development [2] | 0 |
| NV Energy Portfolio Total | | 333,264,129 |

[1] The programs are offered only in Nevada Power's service territory.

[2] Energy savings are not tracked for Program Development, because it is predicated on testing and trials of new potential programs and/or technologies.

Presented in Table DSM-13 below are the authorized DSM program budgets and demand and energy savings targets for 2021.²⁰

Table DSM-13: 2021 DSM Programs Budgets and Savings Targets

| Budget | Authorized Budget | Target Demand Savings (kW) | Target Energy Savings (kWh) |
|---------------------------------------|--------------------|----------------------------|-----------------------------|
| Nevada Power | 2021 | | |
| Energy Education | \$600,000 | 27 | 240,000 |
| Energy Reports | \$800,000 | 4,373 | 11,000,000 |
| Energy Assessments | \$2,110,000 | 3,710 | 8,200,000 |
| Program Development [1] | \$200,000 | 0 | 0 |
| Outreach and Development Total | \$3,710,000 | 8,110 | 19,440,000 |
| Residential Lighting | \$1,040,000 | 1,201 | 16,000,000 |
| Low Income | \$2,500,000 | 146 | 1,545,700 |

¹⁹ Docket No. 20-07004, November 16, 2020, Order, Att. A at Att. 1.

²⁰ *Id.*

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| Budget | Authorized Budget | Target Demand Savings (kW) | Target Energy Savings (kWh) |
|--|--------------------------|-----------------------------------|------------------------------------|
| Direct Install | \$500,000 | 103 | 1,500,000 |
| Residential Demand Response - Manage | \$6,000,000 | 151,673 | 23,000,000 |
| Residential Demand Response - Build | \$4,000,000 | 11,493 | 3,000,000 |
| Pool Pumps | \$750,000 | 755 | 2,625,000 |
| Residential High Efficiency Air Conditioning | \$3,300,000 | 2,759 | 5,400,000 |
| Home Services Total | \$18,090,000 | 168,130 | 53,070,700 |
| Energy Smart Schools | \$1,500,000 | 1,885 | 12,500,000 |
| Commercial Services | \$14,000,000 | 22,888 | 154,235,000 |
| Commercial Demand Response - Manage | \$650,000 | 23,495 | 6,000,000 |
| Commercial Demand Response - Build | \$850,000 | 4,430 | 150,000 |
| Business Services Total | \$17,000,000 | 52,699 | 172,885,000 |
| Nevada Power Portfolio Total | \$38,800,000 | 228,939 | 245,395,700 |
| Sierra | 2021 | | |
| Energy Education | \$475,000 | 14 | 120,000 |
| Energy Reports | \$500,000 | 1,488 | 5,000,000 |
| Energy Assessments | \$925,000 | 604 | 2,030,000 |
| Program Development [1] | \$100,000 | 0 | 0 |
| Outreach and Development Total | \$2,000,000 | 2,106 | 7,150,000 |
| Residential Lighting | \$600,000 | 594 | 7,000,000 |
| Low Income | \$900,000 | 50 | 531,429 |
| Direct Install | \$150,000 | 43 | 600,000 |
| Residential Demand Response - Manage | \$750,000 | 14,544 | 2,500,000 |
| Residential Demand Response - Build | \$1,400,000 | 4,600 | 500,000 |
| Home Services Total | \$3,800,000 | 19,831 | 11,131,429 |
| Energy Smart Schools | \$800,000 | 923 | 8,500,000 |
| Commercial Services | \$5,800,000 | 6,716 | 60,529,000 |
| Commercial Demand Response - Manage | \$250,000 | 5,571 | 458,000 |
| Commercial Demand Response - Build | \$450,000 | 466 | 100,000 |
| Business Services Total | \$7,300,000 | 13,676 | 69,587,000 |
| Sierra Portfolio Total | \$13,100,000 | 35,613 | 87,868,429 |
| NV Energy | 2021 | | |
| Energy Education | \$1,075,000 | 41 | 360,000 |
| Energy Reports | \$1,300,000 | 5,861 | 16,000,000 |
| Energy Assessments | \$3,035,000 | 4,314 | 10,230,000 |
| Program Development [1] | \$300,000 | 0 | 0 |
| Outreach and Development Total | \$5,710,000 | 10,216 | 26,590,000 |
| Residential Lighting | \$1,640,000 | 1,795 | 23,000,000 |
| Low Income | \$3,400,000 | 196 | 2,077,129 |
| Direct Install | \$650,000 | 146 | 2,100,000 |
| Residential Demand Response - Manage | \$6,750,000 | 166,217 | 25,500,000 |
| Residential Demand Response - Build | \$5,400,000 | 16,093 | 3,500,000 |
| Pool Pumps | \$750,000 | 755 | 2,625,000 |
| Residential High Efficiency Air Conditioning | \$3,300,000 | 2,759 | 5,400,000 |
| Home Services Total | \$21,890,000 | 187,961 | 64,202,129 |
| Energy Smart Schools | \$2,300,000 | 2,808 | 21,000,000 |

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| Budget | Authorized Budget | Target Demand Savings (kW) | Target Energy Savings (kWh) |
|-------------------------------------|--------------------------|-----------------------------------|------------------------------------|
| Commercial Services | \$19,800,000 | 29,604 | 214,764,000 |
| Commercial Demand Response - Manage | \$900,000 | 29,066 | 6,458,000 |
| Commercial Demand Response - Build | \$1,300,000 | 4,896 | 250,000 |
| Business Services Total | \$24,300,000 | 66,375 | 242,472,000 |
| NV Energy Portfolio Total | \$51,900,000 | 264,552 | 333,264,129 |

[1] Energy (kWh) and demand (kW) savings are not tracked for this program because it is predicated on testing and trials of new potential programs and/or technologies.

2021 Program Year Updates

While the COVID-19 pandemic continues to have an effect on the 2021 DSM portfolio and some programs that NV Energy delivers to customers, the impact is not as great as it was during the 2020 program year. All DSM programs are up and running with no restrictions on participation. Safety protocols, such as social distancing and Personal Protective Equipment (“PPE”) face coverings, are standard policy when interacting with customers. While all DSM programs remain operational, some programs such as Energy Education, In-home Assessments, Direct Install, and Residential DR, require in-person contact and continue to experience reduced participation resulting from COVID-19 impacts. NV Energy has continued to offer virtual and telephonic interactions with contractors and customers where possible. Overall, the 2021 DSM programs have seen increased participation when compared to the 2020 program year.

2021 Low-Income and Underserved Communities Activities

In Docket No. 19-07004, NV Energy was Directed to “work with the Regulatory Operations staff of the Commission and other interested parties to develop a methodology to identify eligible low-income households that could be targets for participation in non-low income specific programs.”²¹ NV Energy has undertaken a concerted effort to reach its low-income customers and those households in underserved communities where energy efficiency and demand-side management products and services would help reduce monthly utility bills. In support of this effort, a variety of strategic communication and outreach tactics are deployed, including, but not limited to, (1) participation at in-person events when safety guidelines are met in light of COVID-19; (2) targeted social media and digital ad campaigns; (3) partnerships with non-profits, schools and community organizations; (4) dissemination of print collateral; (5) signage inside public transportation and at strategically located bus stops; (6) and through radio and television broadcast. The Companies produce messages in both Spanish and English, while leveraging all customer touchpoints and implementing tactics that help our customers become more aware of energy-saving opportunities and how they can maximize their efficiency.

²¹ December 24, 2019, Order at 8, para. 4.

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2021 PowerShift Smart Shop²²

NV Energy will launch the PowerShift Smart Shop in 2021 to provide an additional digital outreach and energy efficiency engagement channel for residential and small business customers. This will support the delivery and implementation of approved programs as follows:

- Enhance the customer’s online energy assessment experience by providing personalized energy-saving tips and information that encourage increased efficiency opportunities and decarbonization measures.
- Reduce the cost of delivering DSM programs with improved transaction capabilities and PowerShift Smart Shop offerings within NV Energy’s energy efficiency programs.
- Educate and inform customers regarding the latest technologies and most energy efficient products and services available to them.

The PowerShift Smart Shop will be used specifically as a marketing and outreach tool and will not affect the overall portfolio budgets or that of individual programs. The use of the PowerShift Smart Shop is provided in each respective program data sheet that will be utilizing the outreach mechanism.

2021 Residential Lighting

NV Energy is continuing to implement the Residential Lighting program with the established measure mix and incentives during the Transition Period, January 1, 2021, through June 30, 2021, and researched a potential new incentives design and measure mix for the remainder of 2021. The Company has been unable to determine a suitable new retail measure mix with incentives that would be cost effective following the Transition Period. Therefore, for the 2019-2021 DSM Plan period remaining after the Transition Period, NV Energy will not be offering the Residential Lighting program incentives at retail locations, as required by paragraph 7(a)(v) of the stipulation in Docket No. 20-07004. Nevertheless, NV Energy is planning, for the period of July 1, 2021, through December 31, 2021, to work with local food pantries and food banks to distribute light-emitting diode (“LED”) bulbs to low-income customers and underserved communities.

²² Previously presented as “online marketplace” in Docket No. 20-07004, Ex. 1.

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Section 4 – Proposed 2022-2024 Action Plan Period

The purpose of the three-year action plan is to provide a detailed specification of actions that NV Energy intends to undertake to meet its demand and energy requirements.²³ Included in this analysis is a determination of proposed DSM programs that should be implemented during the upcoming three-year action plan period. The evaluation also includes an assessment of what steps can be taken to strengthen or enhance the program performance.

DSM 2022-2024 Planning Process

NV Energy's IRP DSM portfolio planning process follows a three-step process: (1) data gathering, (2) preliminary evaluations, and (3) plan development. The high-level details of each step are described below.

1. **Data Gathering:** NV Energy's initial inputs to evaluate current program performance are the M&V reports prepared by a third-party independent evaluator. These reports provide a comprehensive analysis of each program's effectiveness in meeting participation, energy (kWh), and demand (kW) savings targets. Other inputs include NV Energy's 2018 market potential study, data gathered through industry publications, studies, whitepapers, input from the DSM Collaborative, benchmarking against other U.S. utilities' currently-available programs, and researching energy efficiency portfolio offerings, budgets, and savings that were proposed in other commissions' state filings across the U.S.²⁴
2. **Preliminary Evaluation:** Each of the products and services identified in the data gathering process are screened to determine if they are cost effective, feasible in Nevada, and if they are likely to be adopted by customers. The financial analysis includes five industry-developed and Commission-approved tests. NV Energy places the most weight on the NTRC and TRC results.
3. **Plan Development:** NV Energy's proposed DSM portfolio of programs was developed by examining market potential, energy (kWh) and demand (kW) savings potential, cost per kWh value, rate impacts to customers, and discussions with implementation contractors. The development of the DSM action plan is constrained by several factors including (1) feasible levels of energy savings at present market conditions, (2) each program's energy savings potential, and (3) each program's capacity to sustain energy savings year-over-year.

Designing the 2022-2024 DSM Plan

When designing the DSM three-year action plan, NV Energy works to balance its portfolio of programs with proposed budgets, energy (kWh) and demand (kW) savings targets. NV Energy considers the following inputs and aspects: (1) achievable level of energy savings, (2) rate impacts,

²³ NAC 704.9006.

²⁴ Technical Appendix DSM-23.

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(3) participation, (4) system benefits, (5) non-energy benefits, and (6) stakeholder feedback. The details of each input or aspect are described below.

1. **Achievable Level of Energy Savings** – As part of NV Energy’s 2018 IRP, the Companies conducted a market potential study, which provided estimates of the potential reductions in annual energy usage and peak demand for the time horizon 2019 through 2038 for both Nevada Power and Sierra.²⁵ The market potential study identified various levels of savings potential that NV Energy continues to rely on in its 2021 DSM Plan. This information is valuable to NV Energy’s DSM Plan development to target 1.10 percent weather normalized energy savings by utility. The market potential study was designed specifically for Nevada, and its results are dependent upon unique characteristics of Nevadans and NV Energy’s service territories.
2. **Rate Impacts** - NV Energy has prepared a DSM Plan focused on balancing the long-term benefits of energy savings with the short-term impacts on rates (and customer bills). The Commission is required to consider the rate impact of a DSM portfolio to customers, as provided in NRS § 704.785(2) as follows:

When considering whether to approve an energy efficiency or conservation program proposed by an electric utility as part of a plan filed pursuant to NRS § 704.741, the Commission shall consider the effect of any recovery by the electric utility pursuant to this section on the rates of the customers of the electric utility.

Also included as part of the program design is a financial analysis of the DSM Portfolio. The hourly marginal avoided energy costs as determined by NV Energy production model (“PROMOD”) for the IRP resource case are used as an input to determine the final cost-effectiveness ratios for each DSM program. This financial test was performed to confirm the DSM portfolio remains cost-effective with the updated avoided costs.

3. **Participation** - NV Energy is mindful of the trade-off between program design that targets a high-level participation and smaller individual savings versus a smaller number of participants with high-levels of energy savings potential. NV Energy works to balance its design approach for all customer segments. The goal is to provide products and services for all customer segments and achieve a 1.1 percent of weather normalized energy savings by utility.
4. **System Benefits** - NV Energy considered system benefits when designing its 2022 through 2024 DSM Plan. NV Energy has been offering DSM programs for many years with the intention to utilize and align value and benefits. The DSM programs contemplate both energy efficiency and DR to fully integrate, design, and optimize energy (kWh) and demand (kW) savings. In addition to direct bill savings for participants, all customers benefit from the implementation of integrated energy efficiency and DR programs. The

²⁵ Docket No. 18-06003, Ex. 10, at 172-267, Technical Appendix DSM-21.

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DSM Plan presented has the ability to flatten the system load shape and improve the system load factor. This effect is driven by two primary factors: (1) permanent peak demand savings and (2) dispatchable peak demand savings. Permanent peak demand savings result from coincident peak demand savings occurring from energy efficiency programs. For example, the Business Energy Services program²⁶ has had an impact on system peak demand and has reduced the coincident peak over time. Dispatchable peak demand savings result from residential and commercial DR Programs. For example, DR events help reduce the need to purchase expensive peak market energy and provide energy savings and grid benefits for all customers. The DR programs, with respect to grid benefits, are currently used for 10-minute non-spinning operating reserves. DR can also be strategically dispatched, by location, to reduce distribution system congestion or in response to a distribution system emergency. The system can operate similar to a supply-side peaking resource, but also provides an added customer, environmental, and locational dispatch benefits. Growth of DR and distributed energy resource (“DER”) operational capabilities will allow NV Energy to accommodate an increasing amount of renewable energy interconnected to the grid.

5. **Non-Energy Benefits** - Beyond energy (kWh) and demand (kW) savings, there are many benefits that are difficult to quantify without an extensive and costly study. These benefits are often referred to as non-energy benefits. These include, but are not limited to, (1) reduced carrying cost on arrearages with more on-time bill payments; (2) job creation and economic development; (3) water/wastewater bill savings; (4) improved health and comfort; (5) higher productivity; and (6) improved indoor air quality.
6. **Stakeholder Feedback** - NV Energy conducted a number of DSM Collaborative workshops with representatives from Staff, BCP, and other key stakeholders such as The Southwest Energy Efficiency Project (“SWEET”), National Resource Defense Council (“NRDC”), The Sierra Club, Nevadans for Clean affordable Reliable Energy (“NCARE”), and the Governor’s Office of Energy (“GOE”). Major topics of discussion included, but were not limited to, (1) 2020 program results; (2) 2021 program projections; (3) directives from legislation that was passed in 2017; (4) the portfolio of programs to be presented in the 2022 through 2024 DSM Plans; (5) market potential study; (6) low-income programs; (7) rate impacts; (8) income qualifications; (9) non-energy benefits; (10) and cost-effectiveness analysis. The feedback and areas of consensus were incorporated into the development of the DSM Plans.

The Role of Collaboration in DSM Programs

The demand side planning process benefits from collaboration with a range of participants through the DSM Collaborative (the “Collaborative”). Docket Nos. 01-7004 (Sierra) and 01-7016 (Nevada Power) require that the Companies, interveners, and other interested persons:

²⁶ Previously referred to as the Commercial Services program.

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Work collaboratively to develop a list of feasible projects, to determine the appropriate cost/benefit test(s), to determine the projects that should be proposed as either trial or full, to determine the appropriate amount that should be spent on demand-side projects, staff, rebates, etc., and to discuss and resolve any such matters that the parties deem appropriate.²⁷

In compliance with this Commission's directive, the NV Energy DSM team continues to follow a collaborative process, in which interested persons are invited to contribute, review, and make recommendations regarding the conservation and energy efficiency and DR programs. NV Energy continues to schedule Collaborative meetings to work with Staff, BCP, GOE, NRDC, SWEEP, NCARE, Sierra Club, and other interested persons. This process assists NV Energy with presenting this instant filing in a form that meets needs of the intervening parties and helps to identify and recommend the DSM programs that should be proposed. Since NV Energy's 2020 DSM Update Report, the Companies have engaged the Collaborative in the following topics, compliance items, and initiatives:

- The **low-income working group** – as a subcommittee of the Collaborative – was tasked to explore best practices and methodologies to improve approaches to serving low-income customers and underserved communities.²⁸ The working group conducted seven meetings to discuss the development and language that should be included in the low-income draft document. In addition, numerous emails were exchanged between parties to provide all the opportunity to provide inputs into the final document. The full stakeholder's Collaborative met to discuss the final proposed low-income methodology document on August 8, 2020, the proposed methodology is included as Technical Appendix DSM-24.
- The **rate impact working group** – as a subcommittee of the Collaborative – was tasked to develop a recommendation to support a methodology for the Commission to utilize to determine the appropriate NV Energy's DSM budgets and energy saving targets in its next triennial IRP filing for 2022 through 2024.²⁹ The working group conducted seven meetings to discuss the development of NV Energy's rate impact study process. In addition, numerous emails and phone calls were conducted to establish the inputs into the final document. The full stakeholder's Collaborative met to discuss the final proposed low-income methodology document on May 4, 2021, the proposed methodology is included as Technical Appendix DSM-25.
- During quarterly **Collaborative meetings** conducted in 2020 and 2021, NV Energy has provided updates on DSM Programs, stand-alone status on the Low Income Program, Low-Income and Rate Impact working groups status updates, impacts of Nevada's State stay-at-home directives resulting from COVID-19, and updates on the Residential Lighting and

²⁷ Docket No. 01-7004, November 13, 2001, Stipulation at 2, para. 1; Docket No. 01-7016, October 21, 2001, Stipulation at 3, para. 2.

²⁸ Docket No. 19-07004, December 24, 2019, Order at 5, para. 5(b).

²⁹ *Id.* at 6, para. 8, at 8-9, para. 6.

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Residential High Efficiency Air Conditioning (“AC”) program. The meeting presentations (when provided) are included in Technical Appendix DSM-03.

- **Residential Lighting** – during the 2020 program year, NV Energy worked with its implementors to provide updates to the Collaborative that monitored Nevada’s state lighting standards in NRS § 701.260, lighting market penetration, and adoption of ENERGY STAR® lighting, such as, light-emitting diode (“LED”) lamps.³⁰ Based on the passage of AB 54 (2019) and pursuant to Docket No. 20-07004, NV Energy engaged its implementor and retail partners to alert and inform them of the new lighting standard taking effect in 2021.³¹ During program year 2021, NV Energy has continued to offer the Residential Lighting program through the authorized new lighting standard transition period. Additionally, NV Energy has provided a monthly shelf study report on the retail lighting market and the mix of compliant versus non-compliant lamps. Currently, the Nevada retail residential lighting market is nearing the 90 percent penetration threshold. In some big box and home improvement stores, NV Energy is currently in process of terminating the Residential Lighting program. Some smaller retail stores will continue to be allowed to continue the program through June 30, 2021. As stipulated, NV Energy is not incentivizing any retail residential lighting measure mix for the remainder of the 2021 program year, following the end of the transition period on June 30, 2021.³² Additionally, NV Energy has determined that it would not be cost-effective to offer a Residential Lighting program for the action plan period 2022 through 2024.
- **Potential DSM Programs** - another function of the Collaborative is to provide input on new potential programs to be considered for the 2022 through 2024 action plan period.³³ The Collaborative working group was particularly helpful in providing a list of potential measures and programs being implemented by other utilities. In addition, implementation contractors frequently propose new programs. These proposals often have the added benefit of contractors who have performed a market assessment and propose programs with good market potential. Table DSM-14 below provides a list of programs proposed and considered for inclusion in the 2022 through 2024 action plan period.

Table DSM-14: 2022-2024 DSM Programs Considered

| Ln. No. | Program | Delivery Channel | Status | Service Territory |
|----------------|---|--------------------------|---------------|--------------------------|
| 1 | Appliance Rebates | Midstream and Downstream | Adopted | NV Energy |
| 2 | Codes and Standards Subprogram | Upstream | Adopted | NV Energy |
| 3 | Energy Education- Home Building Code Compliance | Midstream | Adopted | NV Energy |
| 4 | Residential Consumer Products | Midstream and Downstream | Adopted | NV Energy |
| 5 | Residential New Construction | Midstream | Adopted | NV Energy |
| 6 | Commercial Demand Response - Manage & Build | Downstream | Existing | NV Energy |
| 7 | Energy Assessments | Downstream | Existing | NV Energy |
| 8 | Energy Education | Downstream | Existing | NV Energy |
| 9 | Energy Reports | Downstream | Existing | NV Energy |

³⁰ *Id.* at 8, para. 5.

³¹ Docket No. 20-07004, November 16, 2020, Order at 5-6, para 7(a).

³² *Id.* Order at 6-7.

³³ *See* Docket No. 20-07004, November 16, 2020, Order at 10, para. 12.

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| Ln. No. | Program | Delivery Channel | Status | Service Territory |
|----------------|--|--------------------------|------------------------------------|--------------------------|
| 10 | Energy Saving Kits- income eligible / low-income | Downstream | Existing | NV Energy |
| 11 | Energy Smart Schools | Midstream and Downstream | Existing | NV Energy |
| 12 | Home Energy Advisor Program - Online | Downstream | Existing | NV Energy |
| 13 | Home Energy Insights- direct mail | Downstream | Existing | NV Energy |
| 14 | In Home Energy Assessments and Direct install | Downstream | Existing | NV Energy |
| 15 | Low Income | Downstream | Existing | NV Energy |
| 16 | Multifamily Energy Audits and Direct Installs | Midstream and Downstream | Existing | NV Energy |
| 17 | Online Energy Assessments | Downstream | Existing | NV Energy |
| 18 | Program Development | Downstream | Existing | NV Energy |
| 19 | Residential Demand Response - Manage & Build | Downstream | Existing | NV Energy |
| 20 | Residential home energy audit and education | Downstream | Existing | NV Energy |
| 21 | Residential Home Energy Audits and Direct Installs | Downstream | Existing | NV Energy |
| 22 | School Education Kits | Midstream and Downstream | Existing | NV Energy |
| 23 | Commercial Services | Midstream and Downstream | Existing | NV Energy |
| 24 | Direct Install | Downstream | Existing combined with new program | NV Energy |
| 25 | Pool Pumps | Midstream and Downstream | Existing combined with new program | Nevada Power |
| 26 | Residential High Efficiency Air Conditioning | Midstream and Downstream | Existing combined with new program | Nevada Power |
| 27 | Enhanced Time Delay Relay Subprogram | Downstream | Not Adopted | NV Energy |
| 28 | Multifamily Home Upgrade Subprogram | Downstream | Not Adopted | NV Energy |
| 29 | Residential Refrigerator & Freezer Recycling | Downstream | Not Adopted | NV Energy |
| 30 | Residential Weatherization | Downstream | Not Adopted | NV Energy |
| 31 | Residential Lighting | Midstream | Terminated | NV Energy |
| 32 | Residential Lighting | Upstream | Terminated | NV Energy |

DSM Plan Evaluation and Program Selection

Based on NV Energy’s 2022 through 2024 planning and design process, which collected the necessary data inputs, analyses, and information, the Companies began its evaluation and program selection process. NV Energy’s key input driver was analyzing the historical performance of programs from 2018 through 2020. Separate DSM Plans for Nevada Power and for Sierra were developed side-by-side, with the goal to achieve or exceed an energy savings goal of an average of 1.10 percent of weather normalized retails sales over the three-year action plan period at each utility. NV Energy collaborated with interested stakeholders to optimize the DSM product offerings to meet the 1.10 percent energy savings target. NV Energy also used new program research to expand its residential programs in comparison to the 2020 and 2021 DSM portfolios. To determine the mix of programs within the DSM Plan, NV Energy was guided by the results of these analyses as well as input from the DSM Collaborative, data from the previous market potential study, net-to-gross study, costs-effectiveness tests, cost/benefit ratios, and the NRS § 704.741 requirement to direct 5 percent of the total DSM Portfolio to a standalone Low Income program.

Proposed Programs for 2022-2024

NV Energy’s implementation strategy integrates and leverages energy efficiency and DR programs through energy education and by customer segment. NV Energy continues to propose integrated services between Nevada Power and Sierra (electric and gas) that are designed to maintain a

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practical budget, optimize energy and demand savings, and increase customer participation, while using a more personalized and customized approach to program delivery. The DSM Plan portfolio has been classified under separate energy saving categories and programs have been bundled into one of the following offerings: (1) Education Services; (2) Residential Services; and (3) Non-Residential Services. Budgets, savings, and cost-effectiveness have been presented at the program level to provide the same level of transparency as in prior filings.

NV Energy's 2022 through 2024 proposed DSM Plan is cost-effective. The DSM team continues to successfully find efficiencies and optimizations within the NV Energy program designs to drive higher savings measures with lower costs. The portfolio of DSM programs presented also provides tools that enable customers to more effectively manage their energy usage, reduce their bills, and reduce greenhouse gasses and other environmental pollutants. The DSM Plan benefits include: (1) saving water, (2) assisting with the integration of variable capacity renewable energy resources, (3) providing an alternative for operating reserves, (4) acting as insurance for electric-system events, (5) contributing to the State's carbon reduction initiatives, and (6) providing a more comfortable and cleaner living environment.

In Table DSM-15 below, NV Energy is proposing the following 13 DSM programs for both Nevada Power and Sierra, which are provided below in order of projected energy savings. The 2022 through 2024 budgets and energy and demand savings targets for Nevada Power, Sierra and NV Energy DSM programs are provided above in Tables DSM-1 and DSM-3.

Table DSM-15: 2022-2024 DSM Proposed Programs in Order of Targeted Energy Savings

| NV Energy | | 2022 | 2023 | 2024 | 2022-2024 |
|-----------------|--|-------------|-------------|-------------|-------------|
| 1 | Business Energy Services | 219,300,000 | 219,300,000 | 219,300,000 | 657,900,000 |
| 2 | Residential Demand Response - Manage & Build | 28,150,000 | 31,750,000 | 34,560,000 | 94,460,000 |
| 3 | Energy Smart Schools | 23,500,000 | 23,500,000 | 23,500,000 | 70,500,000 |
| 4 | Energy Reports | 18,700,000 | 18,700,000 | 18,700,000 | 56,100,000 |
| 5 | Residential Equipment and Plug Loads | 11,000,000 | 11,710,000 | 12,140,000 | 34,850,000 |
| 6 | Commercial Demand Response - Manage & Build | 8,575,000 | 8,625,000 | 8,670,000 | 25,870,000 |
| 7 | Residential Codes and New Construction | 996,000 | 3,040,000 | 7,700,000 | 11,736,000 |
| 8 | Direct Install and Deep Retrofits | 2,940,000 | 3,220,000 | 3,500,000 | 9,660,000 |
| 9 | In-Home Energy Assessments | 2,600,000 | 2,600,000 | 2,600,000 | 7,800,000 |
| 10 | Low Income | 1,650,000 | 1,717,500 | 1,803,375 | 5,170,875 |
| 11 | Energy Education | 1,000,000 | 1,000,000 | 1,000,000 | 3,000,000 |
| 12 | Online Energy Assessments | 0 | 0 | 0 | 0 |
| 13 | Program Development | 0 | 0 | 0 | 0 |
| NV Energy Total | | 318,411,000 | 325,162,500 | 333,473,375 | 977,046,875 |

Tables DSM-16 below presents the program benefits, costs, net-benefits, and NTRC ratios, and Table DSM-17 presents environmental program benefits for the 2022 through 2024 program years.

Table DSM-16: 2022-2024 DSM Portfolio Proposed NTRC Benefits/Costs

| Programs | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio |
|--------------|---------------|------------|-------------------|------------|---------------|------------|-------------------|------------|---------------|------------|-------------------|------------|
| Nevada Power | 2022 | | | | 2023 | | | | 2024 | | | |

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| Programs | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio |
|--|--------------------|-------------------|--------------------|-------------|--------------------|-------------------|--------------------|-------------|--------------------|-------------------|--------------------|-------------|
| Energy Education | 286,390 | 450,000 | (163,610) | 0.64 | 297,473 | 450,000 | (152,527) | 0.66 | 310,172 | 450,000 | (139,828) | 0.69 |
| Energy Reports | 1,052,935 | 725,000 | 327,935 | 1.45 | 1,062,678 | 725,000 | 337,678 | 1.47 | 978,871 | 725,000 | 253,871 | 1.35 |
| Online Energy Assessments | 0 | 1,050,000 | (1,050,000) | 0.00 | 0 | 1,050,000 | (1,050,000) | 0.00 | 0 | 1,050,000 | (1,050,000) | 0.00 |
| Program Development | 0 | 0 | 0 | 0.00 | 0 | 0 | 0 | 0.00 | 0 | 0 | 0 | 0.00 |
| Education Services Total | 1,339,325 | 2,225,000 | (885,675) | 0.60 | 1,360,151 | 2,225,000 | (864,849) | 0.61 | 1,289,042 | 2,225,000 | (935,958) | 0.58 |
| Residential Equipment and Plug Loads | 6,299,403 | 8,399,160 | (2,099,758) | 0.75 | 6,632,146 | 8,639,862 | (2,007,716) | 0.77 | 6,928,245 | 8,761,402 | (1,833,157) | 0.79 |
| Residential Codes and New Construction | 518,034 | 581,512 | (63,478) | 0.89 | 1,458,723 | 1,485,986 | (27,263) | 0.98 | 3,824,964 | 2,129,397 | 1,695,567 | 1.80 |
| Low Income | 572,607 | 2,219,999 | (1,647,392) | 0.26 | 620,087 | 2,312,000 | (1,691,913) | 0.27 | 694,134 | 2,392,000 | (1,697,866) | 0.29 |
| Direct Install and Deep Retrofits | 648,193 | 709,939 | (61,745) | 0.91 | 831,943 | 785,079 | 46,864 | 1.06 | 1,016,472 | 860,407 | 156,066 | 1.18 |
| Residential Demand Response - Manage | 104,391,411 | 20,229,742 | 84,161,669 | 5.16 | 114,731,367 | 22,223,376 | 92,507,991 | 5.16 | 125,104,575 | 24,505,180 | 100,599,395 | 5.11 |
| Residential Demand Response - Build | 31,284,841 | 12,579,209 | 18,705,632 | 2.49 | 32,272,480 | 12,676,358 | 19,596,122 | 2.55 | 33,379,323 | 12,831,797 | 20,547,527 | 2.60 |
| In-Home Energy Assessments | 353,284 | 1,070,000 | (716,716) | 0.33 | 341,502 | 1,070,000 | (728,498) | 0.32 | 349,045 | 1,070,000 | (720,955) | 0.33 |
| Residential Services Total | 144,067,773 | 45,789,561 | 98,278,212 | 3.15 | 156,888,249 | 49,192,660 | 107,695,589 | 3.19 | 171,296,759 | 52,550,182 | 118,746,577 | 3.26 |
| Energy Smart Schools | 2,214,303 | 1,732,416 | 481,886 | 1.28 | 2,246,887 | 1,732,416 | 514,471 | 1.30 | 2,207,970 | 1,732,416 | 475,554 | 1.27 |
| Business Energy Services | 49,004,478 | 27,097,014 | 21,907,464 | 1.81 | 50,788,941 | 27,097,014 | 23,691,927 | 1.87 | 52,824,189 | 27,097,014 | 25,727,175 | 1.95 |
| Commercial Demand Response - Manage | 15,935,900 | 3,559,248 | 12,376,652 | 4.48 | 15,176,166 | 3,447,087 | 11,729,080 | 4.40 | 16,934,082 | 3,832,722 | 13,101,361 | 4.42 |
| Commercial Demand Response - Build | 3,758,964 | 1,471,593 | 2,287,371 | 2.55 | 3,875,842 | 1,484,546 | 2,391,296 | 2.61 | 4,006,325 | 1,491,023 | 2,515,303 | 2.69 |
| Non-Residential Services Total | 70,913,645 | 33,860,270 | 37,053,374 | 2.09 | 72,087,836 | 33,761,063 | 38,326,773 | 2.14 | 75,972,567 | 34,153,174 | 41,819,393 | 2.22 |
| Nevada Power Total | 216,320,743 | 81,874,832 | 134,445,912 | 2.64 | 230,336,235 | 85,178,723 | 145,157,512 | 2.70 | 248,558,368 | 88,928,357 | 159,630,012 | 2.80 |
| Sierra | 2022 | | | | 2023 | | | | 2024 | | | |
| Energy Education | 192,188 | 310,000 | (117,811) | 0.62 | 199,644 | 310,000 | (110,356) | 0.64 | 208,039 | 310,000 | (101,961) | 0.67 |
| Energy Reports | 597,012 | 390,000 | 207,012 | 1.53 | 599,850 | 390,000 | 209,850 | 1.54 | 555,482 | 390,000 | 165,482 | 1.42 |
| Online Energy Assessments | 0 | 420,000 | (420,000) | 0.00 | 0 | 420,000 | (420,000) | 0.00 | 0 | 420,000 | (420,000) | 0.00 |
| Program Development | 0 | 0 | 0 | 0.00 | 0 | 0 | 0 | 0.00 | 0 | 0 | 0 | 0.00 |
| Education Services Total | 789,200 | 1,120,000 | (330,800) | 0.70 | 799,494 | 1,120,000 | (320,506) | 0.71 | 763,522 | 1,120,000 | (356,478) | 0.68 |
| Residential Equipment and Plug Loads | 606,241 | 2,346,843 | (1,740,602) | 0.26 | 699,489 | 2,443,970 | (1,744,481) | 0.29 | 772,103 | 2,504,289 | (1,732,187) | 0.31 |
| Residential Codes and New Construction | 338,598 | 284,132 | 54,466 | 1.19 | 1,214,567 | 732,572 | 481,995 | 1.66 | 3,115,873 | 1,058,270 | 2,057,603 | 2.94 |
| Low Income | 140,901 | 703,999 | (563,099) | 0.20 | 145,929 | 731,000 | (585,071) | 0.20 | 151,802 | 756,000 | (604,199) | 0.20 |

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| Programs | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio |
|--|--------------------|-------------------|--------------------|-------------|--------------------|-------------------|--------------------|-------------|--------------------|-------------------|--------------------|-------------|
| Direct Install and Deep Retrofits | 243,216 | 384,093 | (140,877) | 0.63 | 306,027 | 405,766 | (99,739) | 0.75 | 381,129 | 431,126 | (49,997) | 0.88 |
| Residential Demand Response - Manage | 11,721,970 | 3,717,391 | 8,004,579 | 3.15 | 11,197,461 | 3,963,841 | 7,233,620 | 2.82 | 11,447,710 | 3,833,273 | 7,614,436 | 2.99 |
| Residential Demand Response - Build | 4,383,310 | 3,153,126 | 1,230,184 | 1.39 | 4,514,888 | 3,377,019 | 1,137,869 | 1.34 | 4,663,316 | 3,311,168 | 1,352,148 | 1.41 |
| In-Home Energy Assessments | 98,024 | 380,000 | (281,976) | 0.26 | 94,802 | 380,000 | (285,198) | 0.25 | 98,300 | 380,000 | (281,700) | 0.26 |
| Residential Services Total | 17,532,259 | 10,969,585 | 6,562,674 | 1.60 | 18,173,163 | 12,034,168 | 6,138,995 | 1.51 | 20,630,232 | 12,274,128 | 8,356,104 | 1.68 |
| Energy Smart Schools | 986,281 | 1,231,215 | (244,934) | 0.80 | 996,186 | 1,231,215 | (235,029) | 0.81 | 968,147 | 1,231,215 | (263,068) | 0.79 |
| Business Energy Services | 22,400,499 | 10,698,526 | 11,701,973 | 2.09 | 23,181,176 | 10,698,526 | 12,482,650 | 2.17 | 24,042,868 | 10,698,526 | 13,344,343 | 2.25 |
| Commercial Demand Response - Manage | 2,181,018 | 1,299,576 | 881,442 | 1.68 | 4,326,447 | 1,625,322 | 2,701,125 | 2.66 | 5,178,857 | 1,625,321 | 3,553,536 | 3.19 |
| Commercial Demand Response - Build | 1,359,180 | 1,311,613 | 47,567 | 1.04 | 1,400,313 | 1,067,965 | 332,348 | 1.31 | 1,446,388 | 1,008,698 | 437,690 | 1.43 |
| Non-Residential Services Total | 26,926,978 | 14,540,929 | 12,386,049 | 1.85 | 29,904,121 | 14,623,027 | 15,281,095 | 2.05 | 31,636,261 | 14,563,760 | 17,072,501 | 2.17 |
| Sierra Total | 45,248,437 | 26,630,514 | 18,617,924 | 1.70 | 48,876,778 | 27,777,194 | 21,099,584 | 1.76 | 53,030,014 | 27,957,887 | 25,072,127 | 1.90 |
| NV Energy | 2022 | | | | 2023 | | | | 2024 | | | |
| Energy Education | 478,578 | 760,000 | (281,422) | 0.63 | 497,117 | 760,000 | (262,883) | 0.65 | 518,211 | 760,000 | (241,789) | 0.68 |
| Energy Reports | 1,649,947 | 1,115,000 | 534,947 | 1.48 | 1,662,527 | 1,115,000 | 547,527 | 1.49 | 1,534,353 | 1,115,000 | 419,353 | 1.38 |
| Online Energy Assessments | 0 | 1,470,000 | (1,470,000) | 0.00 | 0 | 1,470,000 | (1,470,000) | 0.00 | 0 | 1,470,000 | (1,470,000) | 0.00 |
| Program Development | 0 | 0 | 0 | 0.00 | 0 | 0 | 0 | 0.00 | 0 | 0 | 0 | 0.00 |
| Education Services Total | 2,128,525 | 3,345,000 | (1,216,474) | 0.64 | 2,159,644 | 3,345,000 | (1,185,355) | 0.65 | 2,052,564 | 3,345,000 | (1,292,436) | 0.61 |
| Residential Equipment and Plug Loads | 6,905,644 | 10,746,004 | (3,840,360) | 0.64 | 7,331,635 | 11,083,832 | (3,752,196) | 0.66 | 7,700,348 | 11,265,691 | (3,565,343) | 0.68 |
| Residential Codes and New Construction | 856,632 | 865,644 | (9,012) | 0.99 | 2,673,290 | 2,218,557 | 454,733 | 1.20 | 6,940,837 | 3,187,668 | 3,753,169 | 2.18 |
| Low Income | 713,508 | 2,923,999 | (2,210,491) | 0.24 | 766,016 | 3,043,000 | (2,276,984) | 0.25 | 845,936 | 3,148,000 | (2,302,064) | 0.27 |
| Direct Install and Deep Retrofits | 891,409 | 1,094,032 | (202,623) | 0.81 | 1,137,970 | 1,190,845 | (52,875) | 0.96 | 1,397,601 | 1,291,533 | 106,068 | 1.08 |
| Residential Demand Response - Manage | 116,113,381 | 23,947,133 | 92,166,249 | 4.85 | 125,928,828 | 26,187,216 | 99,741,611 | 4.81 | 136,552,284 | 28,338,453 | 108,213,831 | 4.82 |
| Residential Demand Response - Build | 35,668,151 | 15,732,335 | 19,935,815 | 2.27 | 36,787,369 | 16,053,377 | 20,733,991 | 2.29 | 38,042,640 | 16,142,965 | 21,899,674 | 2.36 |
| In-Home Energy Assessments | 451,308 | 1,450,000 | (998,692) | 0.31 | 436,305 | 1,450,000 | (1,013,695) | 0.30 | 447,345 | 1,450,000 | (1,002,655) | 0.31 |
| Residential Services Total | 161,600,033 | 56,759,146 | 104,840,887 | 2.85 | 175,061,412 | 61,226,828 | 113,834,584 | 2.86 | 191,926,991 | 64,824,310 | 127,102,681 | 2.96 |
| Energy Smart Schools | 3,200,583 | 2,963,631 | 236,952 | 1.08 | 3,243,073 | 2,963,631 | 279,441 | 1.09 | 3,176,118 | 2,963,631 | 212,486 | 1.07 |

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| Programs | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio | Benefits (\$) | Costs (\$) | Net Benefits (\$) | NTRC Ratio |
|---------------------------------------|--------------------|--------------------|--------------------|-------------|--------------------|--------------------|--------------------|-------------|--------------------|--------------------|--------------------|-------------|
| Business Energy Services | 71,404,977 | 37,795,539 | 33,609,437 | 1.89 | 73,970,117 | 37,795,539 | 36,174,577 | 1.96 | 76,867,057 | 37,795,539 | 39,071,518 | 2.03 |
| Commercial Demand Response - Manage | 18,116,918 | 4,858,823 | 13,258,095 | 3.73 | 19,502,613 | 5,072,408 | 14,430,205 | 3.84 | 22,112,940 | 5,458,042 | 16,654,897 | 4.05 |
| Commercial Demand Response - Build | 5,118,144 | 2,783,206 | 2,334,939 | 1.84 | 5,276,155 | 2,552,511 | 2,723,644 | 2.07 | 5,452,713 | 2,499,721 | 2,952,993 | 2.18 |
| Non-Residential Services Total | 97,840,622 | 48,401,200 | 49,439,423 | 2.02 | 101,991,957 | 48,384,089 | 53,607,868 | 2.11 | 107,608,828 | 48,716,934 | 58,891,894 | 2.21 |
| NV Energy Total | 261,569,180 | 108,505,345 | 153,063,835 | 2.41 | 279,213,013 | 112,955,917 | 166,257,096 | 2.47 | 301,588,383 | 116,886,244 | 184,702,139 | 2.58 |

[1] Energy (kWh) and demand (kW) savings are not tracked for this program because it is predicated on testing and trials of new potential programs and/or technologies.

Table DSM-17: 2022-2024 DSM Plan Target Environmental Benefits

| Program | Sulfur Dioxide (lbs.) | Carbon Dioxide (lbs.) | Carbon Monoxide (lbs.) | Particulate Matter (lbs.) | Volatile Organic Compounds (lbs.) | Nitrogen Oxides (lbs.) | Heavy Metals (lbs.) | Water Savings (Gallons) |
|--|-----------------------|-----------------------|------------------------|---------------------------|-----------------------------------|------------------------|---------------------|-------------------------|
| Nevada Power | | | | | | | | |
| Energy Education | 18 | 417,642 | 18 | 18 | 0 | 78 | 5 | 27,312 |
| Energy Reports | 348 | 8,074,412 | 348 | 348 | 0 | 1,508 | 104 | 528,032 |
| Online Energy Assessments | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Program Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Education Services Total | 366 | 8,492,054 | 366 | 366 | 0 | 1,586 | 110 | 555,344 |
| Residential Equipment and Plug Loads | 288 | 6,682,272 | 288 | 288 | 0 | 1,248 | 86 | 436,992 |
| Residential Codes and New Construction | 18 | 414,858 | 18 | 18 | 0 | 77 | 5 | 27,130 |
| Low Income | 41 | 939,695 | 41 | 41 | 0 | 176 | 12 | 61,452 |
| Direct Install and Deep Retrofits | 64 | 1,489,590 | 64 | 64 | 0 | 278 | 19 | 97,413 |
| Residential Demand Response - Manage | 660 | 15,313,540 | 660 | 660 | 0 | 2,860 | 198 | 1,001,440 |
| Residential Demand Response - Build | 117 | 2,714,673 | 117 | 117 | 0 | 507 | 35 | 177,528 |
| In-Home Energy Assessments | 60 | 1,392,140 | 60 | 60 | 0 | 260 | 18 | 91,040 |
| Home Services Total | 1,248 | 28,946,767 | 1,248 | 1,248 | 0 | 5,406 | 374 | 1,892,995 |
| Energy Smart Schools | 435 | 10,093,015 | 435 | 435 | 0 | 1,885 | 131 | 660,040 |
| Business Energy Services | 4,440 | 103,018,360 | 4,440 | 4,440 | 0 | 19,240 | 1,332 | 6,736,960 |
| Commercial Demand Response - Manage | 210 | 4,872,490 | 210 | 210 | 0 | 910 | 63 | 318,640 |

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| Program | Sulfur Dioxide (lbs.) | Carbon Dioxide (lbs.) | Carbon Monoxide (lbs.) | Particulate Matter (lbs.) | Volatile Organic Compounds (lbs.) | Nitrogen Oxides (lbs.) | Heavy Metals (lbs.) | Water Savings (Gallons) |
|--|------------------------------|------------------------------|-------------------------------|----------------------------------|--|-------------------------------|----------------------------|--------------------------------|
| Commercial Demand Response - Build | 14 | 327,153 | 14 | 14 | 0 | 61 | 4 | 21,394 |
| Business Services Total | 5,099 | 118,311,018 | 5,099 | 5,099 | 0 | 22,096 | 1,530 | 7,737,034 |
| Nevada Power Total | 6,713 | 155,749,839 | 6,713 | 6,713 | 0 | 29,088 | 2,014 | 10,185,373 |
| Sierra | | | | | | | | |
| Energy Education | 200 | 315,040 | 124 | 16 | 0 | 232 | 4 | 161,896 |
| Energy Reports | 3,550 | 5,591,960 | 2,201 | 284 | 0 | 4,118 | 64 | 2,873,654 |
| Online Energy Assessments | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Program Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Education Services Total | 3,750 | 5,907,000 | 2,325 | 300 | 0 | 4,350 | 68 | 3,035,550 |
| Residential Equipment and Plug Loads | 700 | 1,102,640 | 434 | 56 | 0 | 812 | 13 | 566,636 |
| Residential Codes and New Construction | 200 | 315,040 | 124 | 16 | 0 | 232 | 4 | 161,896 |
| Low Income | 150 | 236,280 | 93 | 12 | 0 | 174 | 3 | 121,422 |
| Direct Install and Deep Retrofits | 400 | 630,080 | 248 | 32 | 0 | 464 | 7 | 323,792 |
| Residential Demand Response - Manage | 775 | 1,220,780 | 481 | 62 | 0 | 899 | 14 | 627,347 |
| Residential Demand Response - Build | 350 | 551,320 | 217 | 28 | 0 | 406 | 6 | 283,318 |
| In-Home Energy Assessments | 300 | 472,560 | 186 | 24 | 0 | 348 | 5 | 242,844 |
| Residential Services Total | 2,875 | 4,528,700 | 1,783 | 230 | 0 | 3,335 | 52 | 2,327,255 |
| Energy Smart Schools | 4,500 | 7,088,400 | 2,790 | 360 | 0 | 5,220 | 81 | 3,642,660 |
| Business Energy Services | 35,650 | 56,155,880 | 22,103 | 2,852 | 0 | 41,354 | 642 | 28,857,962 |
| Commercial Demand Response - Manage | 375 | 590,700 | 233 | 30 | 0 | 435 | 7 | 303,555 |
| Commercial Demand Response - Build | 178 | 279,598 | 110 | 14 | 0 | 206 | 3 | 143,683 |
| Non-Residential Services Total | 40,703 | 64,114,578 | 25,236 | 3,256 | 0 | 47,215 | 733 | 32,947,860 |
| Sierra Total | 47,328 | 74,550,278 | 29,343 | 3,786 | 0 | 54,900 | 852 | 38,310,665 |
| NV Energy | | | | | | | | |
| Energy Education | 218 | 732,682 | 142 | 34 | 0 | 310 | 9 | 189,208 |
| Energy Reports | 3,898 | 13,666,372 | 2,549 | 632 | 0 | 5,626 | 168 | 3,401,686 |
| Online Energy Assessments | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| Program | Sulfur Dioxide (lbs.) | Carbon Dioxide (lbs.) | Carbon Monoxide (lbs.) | Particulate Matter (lbs.) | Volatile Organic Compounds (lbs.) | Nitrogen Oxides (lbs.) | Heavy Metals (lbs.) | Water Savings (Gallons) |
|--|------------------------------|------------------------------|-------------------------------|----------------------------------|--|-------------------------------|----------------------------|--------------------------------|
| Program Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Education Services Total | 4,116 | 14,399,054 | 2,691 | 666 | 0 | 5,936 | 177 | 3,590,894 |
| Residential Equipment and Plug Loads | 988 | 7,784,912 | 722 | 344 | 0 | 2,060 | 99 | 1,003,628 |
| Residential Codes and New Construction | 218 | 729,898 | 142 | 34 | 0 | 309 | 9 | 189,026 |
| Low Income | 191 | 1,175,975 | 134 | 53 | 0 | 350 | 15 | 182,874 |
| Direct Install and Deep Retrofits | 464 | 2,119,670 | 312 | 96 | 0 | 742 | 26 | 421,205 |
| Residential Demand Response - Manage | 1,435 | 16,534,320 | 1,141 | 722 | 0 | 3,759 | 212 | 1,628,787 |
| Residential Demand Response - Build | 467 | 3,265,993 | 334 | 145 | 0 | 913 | 41 | 460,846 |
| In-Home Energy Assessments | 360 | 1,864,700 | 246 | 84 | 0 | 608 | 23 | 333,884 |
| Residential Services Total | 4,123 | 33,475,467 | 3,030 | 1,478 | 0 | 8,741 | 426 | 4,220,250 |
| Energy Smart Schools | 4,935 | 17,181,415 | 3,225 | 795 | 0 | 7,105 | 212 | 4,302,700 |
| Business Energy Services | 40,090 | 159,174,240 | 26,543 | 7,292 | 0 | 60,594 | 1,974 | 35,594,922 |
| Commercial Demand Response - Manage | 585 | 5,463,190 | 443 | 240 | 0 | 1,345 | 70 | 622,195 |
| Commercial Demand Response - Build | 192 | 606,751 | 124 | 28 | 0 | 267 | 7 | 165,077 |
| Non-Residential Services Total | 45,802 | 182,425,596 | 30,335 | 8,355 | 0 | 69,311 | 2,262 | 40,684,894 |
| NV Energy Total | 54,040 | 230,300,117 | 36,056 | 10,499 | 0 | 83,988 | 2,866 | 48,496,038 |

[1] Energy (kWh) and demand (kW) savings are not tracked for this program because it is predicated on testing and trials of new potential programs and/or technologies.

DSM Program Initiatives

2022-2024 Low-Income and Underserved Communities Activities

To further support the Low Income Working Group Methodology efforts, NV Energy will implement a variety of strategic communication and outreach tactics, including, but not limited to, (1) participation at in-person events when safety guidelines are met in light of COVID-19; (2) targeted social media and digital ad campaigns; (3) partnerships with non-profits, schools and community organizations; (4) dissemination of print collateral; (5) signage inside public

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transportation and at strategically located bus stops; (6) and radio and television broadcasts.³⁴ NV Energy produces messages in Spanish and English, while leveraging all customer touchpoints and implementing tactics that help our customers become more aware of energy-saving opportunities and how they can maximize their energy efficiency.³⁵

Additionally, in compliance with NAC § 704.934(8), NV Energy has directed 5 percent of its total DSM Plan for the action period 2022 through 2024 towards its standalone Low Income Program, as presented in Table DSM-3 above.

2022-2024 PowerShift Smart Shop³⁶

The PowerShift Smart Shop will provide an additional digital outreach and energy efficiency engagement channel for residential and small business customers. This will support the delivery and implementation of approved programs as follows:

- Enhance the customer’s online energy assessment experience by providing personalized energy-saving tips and information that encourage increased efficiency opportunities and decarbonization measures.
- Reduce the cost of delivering DSM programs with improved transaction capabilities and PowerShift Smart Shop offerings within NV Energy’s energy efficiency programs.
- Educate and inform customers regarding the latest technologies and most energy efficient products and services available to them.

The PowerShift Smart Shop will be used specifically as a marketing and outreach tool and will not affect the overall DSM Plan budgets or that of individual programs. The use of the PowerShift Smart Shop is provided in each respective program data sheet that will be utilizing the outreach mechanism.

2022-2024 Solar Thermal Program

In Docket Nos. 15-07004 and 16-07001, the Commission ordered Nevada Power and Sierra to discontinue stand-alone funding of their respective Solar Thermal Water Heating programs because the programs were not cost effective.³⁷ The Commission determined that providing information to customers through the Companies’ Energy Education programs fulfills the statutory requirement created by NRS 704.741(3) while minimizing costs on the utilities’ customers. Electric water heating represents an insignificant portion of the overall water heating in Nevada’s southern territory and a small portion of the overall water heating in Sierra’s service territory. Costs to run the programs have historically been very high. As shown in the previous iterations of

³⁴ Technical Appendix DSM-24.

³⁵ Technical Appendix DSM-24 at 6-12.

³⁶ Previously filed as “online marketplace” in Docket No. 20-07004.

³⁷ See, e.g., Docket No. 15-07004, February 12, 2016, Modified Order at 58, para. 186.

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the program run at Nevada Power from 2012 through 2015, the program averaged a TRC of 0.09 and a cost per kWh of \$5.86. For Sierra, during the same period, the program delivered a TRC of 0.15 with a cost of \$3.20 per kWh. Accordingly, the Companies propose to continue the practice ordered by the Commission in Docket Nos. 15-07004 and 16-07001. The Companies will continue to provide education to customers and monitor the market and technologies and bring forward for consideration a revitalized the program should costs and technologies allow it.

Estimated Revenue Requirement for the DSM Plan

In accordance with NAC § 704.9523, NV Energy is authorized to recover financial impacts based on the effects of the Companies' energy efficiency and conservation programs. To recover costs from energy efficiency and conservation programs from Docket Nos. 19-07004 and 20-07004, NV Energy filed its annual Deferred Energy Account Adjustment ("DEAA") applications with the Commission on March 1, 2021. In Docket Nos. 21-03005 (Nevada Power) and 21-03006 (Sierra-electric), NV Energy has requested authorization to recover the expenses associated with its DSM programs.

Pursuant to NRS § 704.785 and NAC § 704.95225, which contemplate recovery of cost of DSM programs as well as any financial disincentives relating to DSM programs, NV Energy, as part of its DSM Plan, calculates its potential lost revenues for its action plan period. The Lost Revenue Adjustment Mechanism ("LRAM") calculation shows the loss of revenue and the financial impacts to NV Energy as a result of the proposed DSM Plan expenses.³⁸ NV Energy has calculated its LRAM based on its proposed DSM Plan for its action plan period. The regulation is based on measured and verified energy savings, with a value to be included with the Energy Efficiency Program Rate ("EEPR"). The value of the disincentive offset calculated under this regulation is determined by multiplying the annual expenditures, in each of NV Energy's Energy Efficiency and Conservation programs, by the authorized rate of return, as authorized in the Companies' last General Rate Cases ("GRC"), and grossed up for taxes.³⁹ NV Energy employed the authorized LRAM methodology in calculating the estimated NRS § 704.785 revenue requirement for the 2022 through 2024 action plan period. The computations underlying the multiplier methodology for each program are provided in Table DSM-18 below.

Table DSM-18: 2022-2024 DSM Plan Proposed Budget LRAM Multiplier Value

| Programs | Proposed Budget | Multiplier Value [1] | Proposed Budget | Multiplier Value [1] | Proposed Budget | Multiplier Value [1] |
|--------------------------------------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|
| Nevada Power | 2022 | | 2023 | | 2024 | |
| Energy Education | \$450,000 | \$32,130 | \$450,000 | \$32,130 | \$450,000 | \$32,130 |
| Energy Reports | \$725,000 | \$51,765 | \$725,000 | \$51,765 | \$725,000 | \$51,765 |
| Online Energy Assessments | \$1,050,000 | \$74,970 | \$1,050,000 | \$74,970 | \$1,050,000 | \$74,970 |
| Program Development | \$200,000 | \$14,280 | \$200,000 | \$14,280 | \$200,000 | \$14,280 |
| Education Services Total | \$2,425,000 | \$173,145 | \$2,425,000 | \$173,145 | \$2,425,000 | \$173,145 |
| Residential Equipment and Plug Loads | \$5,600,000 | \$399,840 | \$5,800,000 | \$414,120 | \$5,900,000 | \$421,260 |

³⁸ NAC 704.95225; *see also* Docket No. 14-10018, October 5, 2015, Order at 3.

³⁹ Nevada Power Docket No. 20-06003, December 11, 2020, Order at 9, para. 4; Sierra Docket No. 19-06002, Order at 9, para. 3.

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| Programs | Proposed Budget | Multiplier Value [1] | Proposed Budget | Multiplier Value [1] | Proposed Budget | Multiplier Value [1] |
|--|------------------------|-----------------------------|------------------------|-----------------------------|------------------------|-----------------------------|
| Residential Codes and New Construction | \$420,000 | \$29,988 | \$1,100,000 | \$78,540 | \$1,560,000 | \$111,384 |
| Low Income | \$2,220,000 | \$158,508 | \$2,312,000 | \$165,077 | \$2,392,000 | \$170,789 |
| Direct Install and Deep Retrofits | \$680,000 | \$48,552 | \$740,000 | \$52,836 | \$800,000 | \$57,120 |
| Residential Demand Response - Manage | \$7,100,000 | \$506,940 | \$7,800,000 | \$556,920 | \$8,600,000 | \$614,040 |
| Residential Demand Response - Build | \$7,900,000 | \$564,060 | \$7,900,000 | \$564,060 | \$7,900,000 | \$564,060 |
| In-Home Energy Assessments | \$1,070,000 | \$76,398 | \$1,070,000 | \$76,398 | \$1,070,000 | \$76,398 |
| Residential Services Total | \$24,990,000 | \$1,784,286 | \$26,722,000 | \$1,907,951 | \$28,222,000 | \$2,015,051 |
| Energy Smart Schools | \$1,350,000 | \$96,390 | \$1,350,000 | \$96,390 | \$1,350,000 | \$96,390 |
| Business Energy Services | \$14,000,000 | \$999,600 | \$14,000,000 | \$999,600 | \$14,000,000 | \$999,600 |
| Commercial Demand Response - Manage | \$800,000 | \$57,120 | \$900,000 | \$64,260 | \$1,000,000 | \$71,400 |
| Commercial Demand Response - Build | \$800,000 | \$57,120 | \$800,000 | \$57,120 | \$800,000 | \$57,120 |
| Non-Residential Services Total | \$16,950,000 | \$1,210,230 | \$17,050,000 | \$1,217,370 | \$17,150,000 | \$1,224,510 |
| Nevada Power Total | \$44,365,000 | \$3,167,661 | \$46,197,000 | \$3,298,466 | \$47,797,000 | \$3,412,706 |
| Sierra | 2022 | | 2023 | | 2024 | |
| Energy Education | \$310,000 | \$20,910 | \$310,000 | \$20,910 | \$310,000 | \$20,910 |
| Energy Reports | \$390,000 | \$26,306 | \$390,000 | \$26,306 | \$390,000 | \$26,306 |
| Online Energy Assessments | \$420,000 | \$28,330 | \$420,000 | \$28,330 | \$420,000 | \$28,330 |
| Program Development | \$70,000 | \$4,722 | \$70,000 | \$4,722 | \$70,000 | \$4,722 |
| Education Services Total | \$1,190,000 | \$80,267 | \$1,190,000 | \$80,267 | \$1,190,000 | \$80,267 |
| Residential Equipment and Plug Loads | \$800,000 | \$53,961 | \$880,000 | \$59,357 | \$930,000 | \$62,730 |
| Residential Codes and New Construction | \$280,000 | \$18,886 | \$720,000 | \$48,565 | \$1,040,000 | \$70,150 |
| Low Income | \$704,000 | \$47,486 | \$731,000 | \$49,307 | \$756,000 | \$50,993 |
| Direct Install and Deep Retrofits | \$370,000 | \$24,957 | \$390,000 | \$26,306 | \$410,000 | \$27,655 |
| Residential Demand Response - Manage | \$750,000 | \$50,589 | \$800,000 | \$53,961 | \$900,000 | \$60,706 |
| Residential Demand Response - Build | \$2,000,000 | \$134,903 | \$2,000,000 | \$134,903 | \$2,000,000 | \$134,903 |
| In-Home Energy Assessments | \$380,000 | \$25,632 | \$380,000 | \$25,632 | \$380,000 | \$25,632 |
| Residential Services Total | \$5,284,000 | \$356,414 | \$5,901,000 | \$398,031 | \$6,416,000 | \$432,769 |
| Energy Smart Schools | \$770,000 | \$51,938 | \$770,000 | \$51,938 | \$770,000 | \$51,938 |
| Business Energy Services | \$5,700,000 | \$384,473 | \$5,700,000 | \$384,473 | \$5,700,000 | \$384,473 |
| Commercial Demand Response - Manage | \$320,000 | \$21,584 | \$400,000 | \$26,981 | \$400,000 | \$26,981 |
| Commercial Demand Response - Build | \$670,000 | \$45,192 | \$670,000 | \$45,192 | \$670,000 | \$45,192 |
| Non-Residential Services Total | \$7,460,000 | \$503,188 | \$7,540,000 | \$508,584 | \$7,540,000 | \$508,584 |
| Sierra Total | \$13,934,000 | \$939,869 | \$14,631,000 | \$986,883 | \$15,146,000 | \$1,021,620 |
| NV Energy | 2022 | | 2023 | | 2024 | |
| Energy Education | \$760,000 | \$53,040 | \$760,000 | \$53,040 | \$760,000 | \$53,040 |
| Energy Reports | \$1,115,000 | \$78,071 | \$1,115,000 | \$78,071 | \$1,115,000 | \$78,071 |
| Online Energy Assessments | \$1,470,000 | \$103,300 | \$1,470,000 | \$103,300 | \$1,470,000 | \$103,300 |
| Program Development | \$270,000 | \$19,002 | \$270,000 | \$19,002 | \$270,000 | \$19,002 |
| Education Services Total | \$3,615,000 | \$253,412 | \$3,615,000 | \$253,412 | \$3,615,000 | \$253,412 |
| Residential Equipment and Plug Loads | \$6,400,000 | \$453,801 | \$6,680,000 | \$473,477 | \$6,830,000 | \$483,990 |
| Residential Codes and New Construction | \$700,000 | \$48,874 | \$1,820,000 | \$127,105 | \$2,600,000 | \$181,534 |
| Low Income | \$2,924,000 | \$205,994 | \$3,043,000 | \$214,384 | \$3,148,000 | \$221,782 |
| Direct Install and Deep Retrofits | \$1,050,000 | \$73,509 | \$1,130,000 | \$79,142 | \$1,210,000 | \$84,775 |
| Residential Demand Response - Manage | \$7,850,000 | \$557,529 | \$8,600,000 | \$610,881 | \$9,500,000 | \$674,746 |
| Residential Demand Response - Build | \$9,900,000 | \$698,963 | \$9,900,000 | \$698,963 | \$9,900,000 | \$698,963 |
| In-Home Energy Assessments | \$1,450,000 | \$102,030 | \$1,450,000 | \$102,030 | \$1,450,000 | \$102,030 |
| Residential Services Total | \$30,274,000 | \$2,140,700 | \$32,623,000 | \$2,305,982 | \$34,638,000 | \$2,447,819 |
| Energy Smart Schools | \$2,120,000 | \$148,328 | \$2,120,000 | \$148,328 | \$2,120,000 | \$148,328 |
| Business Energy Services | \$19,700,000 | \$1,384,073 | \$19,700,000 | \$1,384,073 | \$19,700,000 | \$1,384,073 |

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| Programs | Proposed Budget | Multiplier Value [1] | Proposed Budget | Multiplier Value [1] | Proposed Budget | Multiplier Value [1] |
|---------------------------------------|------------------------|-----------------------------|------------------------|-----------------------------|------------------------|-----------------------------|
| Commercial Demand Response - Manage | \$1,120,000 | \$78,704 | \$1,300,000 | \$91,241 | \$1,400,000 | \$98,381 |
| Commercial Demand Response - Build | \$1,470,000 | \$102,312 | \$1,470,000 | \$102,312 | \$1,470,000 | \$102,312 |
| Non-Residential Services Total | \$24,410,000 | \$1,713,418 | \$24,590,000 | \$1,725,954 | \$24,690,000 | \$1,733,094 |
| NV Energy Total | \$58,299,000 | \$4,107,530 | \$60,828,000 | \$4,285,348 | \$62,943,000 | \$4,434,326 |

[1] Nevada Power GRC Docket No. 20-06003 and Sierra GRC Docket No. 19-06002.⁴⁰

Economic Impact

DSM programs create and maintain both direct and indirect jobs and economic investment. DSM programs engage contractors and other service providers who deliver the programs. DSM programs may encourage new firms to join the PowerShift Smart Shop or existing firms to expand their size to accommodate an increase in work enabled by rebate and incentive programs. For some contractors, the rebate and incentive programs enable them to perform work that would not have been performed absent the DSM program, thus offsetting the need for layoffs. The DSM programs impact the entire supply chain from manufacturers to wholesalers and distributors to retailers and those who specify equipment.

In addition, dollars saved by residential and commercial customers are available to be reinvested into the community. Residential customers may take the savings from their utility bills and spend them in local restaurants or with retailers or use them to perform additional work on their homes. Commercial customers who participate in programs may have higher profit margins and can afford to expand their businesses, hire additional employees, and perform additional work on their facilities. In the case of schools, utility savings can be used to offset budget shortfalls. For each indirect job created by the program, additional dollars are available for reinvestment in the community generating further economic benefits for all citizens. In Docket No. 18-06003, the DSM action plan period (2019-2021), the Companies used the Report from the Executive Office of the President Council of Economic Advisers: *Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009* to calculate its estimated jobs created value.⁴¹ NV Energy has updated its jobs created value to 13.4 per \$1 million.⁴² Employing this formula for NV Energy's DSM Plan for the 2022 through 2024 program years is estimated to create 2,434 jobs, as shown below in Table DSM-19.

⁴⁰ *Id.*

⁴¹ Ex. 6 at 41.

⁴² NV Energy has used four sources to develop an average value per million equivalent multipliers of 13.4: (1) The ACEEE Fact Sheet (20/\$1 million), (2) The Political Economy Research Institute (2019) (12.2/\$1 million), (3) Estimates of Job Creation From the American Recovery and Reinvestment Act of 2009 (10.87/\$1 million), and (4) Economic Policy Institute (2019) (10.4/\$1 million).

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Table DSM-19: 2022-2024 DSM Plan Direct, Indirect, and Induced Jobs Created

| Programs | 2022 | 2023 | 2024 | 2022-2024 |
|--|------------|------------|------------|-------------|
| Nevada Power | | | | |
| Energy Education | 6 | 6 | 6 | 18 |
| Energy Reports | 10 | 10 | 10 | 29 |
| Online Energy Assessments | 14 | 14 | 14 | 42 |
| Program Development | 3 | 3 | 3 | 8 |
| Education Services Total | 32 | 32 | 32 | 97 |
| In-Home Energy Assessments | 14 | 14 | 14 | 43 |
| Residential Equipment and Plug Loads | 75 | 78 | 79 | 231 |
| Residential Codes and New Construction | 6 | 15 | 21 | 41 |
| Low Income | 30 | 31 | 32 | 93 |
| Direct Install and Deep Retrofits | 9 | 10 | 11 | 30 |
| Residential Demand Response - Manage | 95 | 104 | 115 | 314 |
| Residential Demand Response - Build | 106 | 106 | 106 | 317 |
| Residential Services Total | 334 | 357 | 377 | 1069 |
| Energy Smart Schools | 18 | 18 | 18 | 54 |
| Business Energy Services | 187 | 187 | 187 | 561 |
| Commercial Demand Response - Manage | 11 | 12 | 13 | 36 |
| Commercial Demand Response - Build | 11 | 11 | 11 | 32 |
| Non-Residential Services Total | 227 | 228 | 229 | 684 |
| Nevada Power Total | 593 | 618 | 639 | 1849 |
| Sierra | | | | |
| Energy Education | 4 | 4 | 4 | 12 |
| Energy Reports | 5 | 5 | 5 | 16 |
| Online Energy Assessments | 6 | 6 | 6 | 17 |
| Program Development | 1 | 1 | 1 | 3 |
| Education Services Total | 16 | 16 | 16 | 48 |
| In-Home Energy Assessments | 5 | 5 | 5 | 15 |
| Residential Equipment and Plug Loads | 11 | 12 | 12 | 35 |
| Residential Codes and New Construction | 4 | 10 | 14 | 27 |
| Low Income | 9 | 10 | 10 | 29 |
| Direct Install and Deep Retrofits | 5 | 5 | 5 | 16 |
| Residential Demand Response - Manage | 10 | 11 | 12 | 33 |
| Residential Demand Response - Build | 27 | 27 | 27 | 80 |
| Residential Services Total | 71 | 79 | 86 | 235 |
| Energy Smart Schools | 10 | 10 | 10 | 31 |
| Business Energy Services | 76 | 76 | 76 | 229 |
| Commercial Demand Response - Manage | 4 | 5 | 5 | 15 |
| Commercial Demand Response - Build | 9 | 9 | 9 | 27 |
| Non-Residential Services Total | 100 | 101 | 101 | 301 |
| Sierra Total | 186 | 196 | 202 | 584 |
| NV Energy | | | | |
| Energy Education | 10 | 10 | 10 | 30 |
| Energy Reports | 15 | 15 | 15 | 45 |
| Online Energy Assessments | 20 | 20 | 20 | 59 |

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| Programs | 2022 | 2023 | 2024 | 2022-2024 |
|--|-------------|-------------|-------------|------------------|
| Program Development | 4 | 4 | 4 | 11 |
| Education Services Total | 48 | 48 | 48 | 145 |
| In-Home Energy Assessments | 19 | 19 | 19 | 58 |
| Residential Equipment and Plug Loads | 86 | 89 | 91 | 266 |
| Residential Codes and New Construction | 9 | 24 | 35 | 68 |
| Low Income | 39 | 41 | 42 | 122 |
| Direct Install and Deep Retrofits | 14 | 15 | 16 | 45 |
| Residential Demand Response - Manage | 105 | 115 | 127 | 347 |
| Residential Demand Response - Build | 132 | 132 | 132 | 397 |
| Residential Services Total | 405 | 436 | 463 | 1304 |
| Energy Smart Schools | 28 | 28 | 28 | 85 |
| Business Energy Services | 263 | 263 | 263 | 790 |
| Commercial Demand Response - Manage | 15 | 17 | 19 | 51 |
| Commercial Demand Response - Build | 20 | 20 | 20 | 59 |
| Non-Residential Services Total | 326 | 329 | 330 | 985 |
| NV Energy Total | 779 | 813 | 841 | 2434 |

Impact of New Technologies

Pursuant to NAC § 704.934(3), NV Energy is tasked to create its DSM Plan considering the potential impacts and benefits of applicable new technologies. The new technologies include the advances of digital and information systems. NV Energy’s consideration of new technologies regularly occurs through several mechanisms:

- Industry collaboration and learning:** NV Energy is an active participant in the energy conservation and efficiency community, through the DSM Collaborative, industry conferences, and special meetings. New technologies ranging from advanced lighting to the potential for whole-house programs are discussed at most meetings of the DSM Collaborative. NV Energy is also active in industry conservation and efficiency associations such as SWEEP, the Peak Load Management Alliance, the Association of Energy Service Professionals, and the American Council for an Energy Efficient Economy (“ACEEE”), and ESource. Webinars, teleconferences, and annual meetings of these organizations feature technical innovation topics. NV Energy staff attended conferences and meetings, often as invited speakers.
- Internal process improvements:** The Demand Response Management System (“DRMS”) is an enterprise software system that manages a wide range of demand response program business processes such as: (1) customer enrollment, (2) device management, (3) device provisioning, (4) workforce management related to device installation and service, (5) demand response event and dispatch management, (6) event notifications, (7) event forecasting, and (8) a wide range of reporting functions. It functions as the system of record for customers participating in DSM programs, like e.g. demand response, in-home energy assessment, or direct installation. DRMS also is integrated with a number of other major enterprise systems such as: Meter Data Management System; customer billing system

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(Banner); Geospatial Information System (“GIS”); and many thermostat vendors’ utility portals. As a part of DR, device types currently managed by DRMS include paging thermostats, smart thermostats, demand limiting controllers, and gateways connected to various customer end-use loads, including limited battery control. DRMS; however, does not natively support control of Distribution Energy Resources (“DERs”), including reverse DR functionality. Also, DRMS has limitations with respect to scalability and flexibility to accommodate new DERs required to fully support distribution system operations. To accommodate the new DERs; such as Energy Storage, Photovoltaic Systems (“PV”), flexible loads including Electric Vehicles (“EVs”), EV charging stations, grid interactive water heaters or building energy systems; NV Energy started researching a possibility to implement Distributed Energy Resource Management System (“DERMS”). The DERMS is seen as a bridge between DRMS and the Company’s Advanced Distribution Management System (“ADMS”) in order to provide DER visibility, coordinated control of Front-of-the-Meter (“FTM”) and Behind-the-Meter (“BTM”) assets; and customer and premise related functions (enrollment, device registration and provisioning, program management, dynamic pricing, and financial settlement functions). NV Energy considers DERMS as a foundational infrastructure for a modern grid powered by renewables, storage, and other DER technologies both FTM and BTM. Additional information about DERMS can be found in Section 9(B) of the DRP.

- **Program Development:** NV Energy conducted program development trials to explore promising new technologies. Advances in electronics, computing, and communications play a strong role in these trials, which are described in more detail in the individual program data sheets included in this plan. These activities, which are described in more detail in the Program Development program data sheet, are performed jointly at Nevada Power and Sierra, and with others to leverage available resources.
- **New Database and Communications Capabilities:** Enhancements made to the NV Energy MyAccount web portal now allow online enrollment in PowerShift programs, such as DR or in-home energy assessments. Details like installation mode, i.e. direct installation vs self-installation, can be selected along with an installation date scheduling. DSM team works also on enabling Bring Your Own Thermostat functionality for NV Energy customers. A new tool, DSM Business Intelligent (“DSMBI”), has been created to provide a convenient place for tracking DSM program-related Key Performance Indicators (“KPIs”). With DSMBI, DSM programs managers can in a real time track performance of their programs and make fast decisions fostering continuous process improvement.
- **Environmental Respect:** Due to the growing importance of environmental respect, the need to reduce carbon dioxide waste, and to improve processes, DSM team has moved away from traditional paper agreements with PowerShift programs participants and replaced them with an e-signature solution. Since implementation of the e-signature tool, around 8,400 electronic documents have been created.

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Overview of the Financial Model

NV Energy utilizes the PortfolioPro model⁴³ to determine the cost effectiveness of each program evaluated in this filing. The model uses the California Standard Practice Manual and follows generally accepted industry practices for cost effectiveness evaluation of DSM programs. The PortfolioPro model manual is provided in Technical Appendix DSM-01. NV Energy has employed the model to determine the cost effectiveness of DSM programs since 2006. A list of updates and enhancements that were implemented for the financial modeling process for 2020 and 2022 through 2024 is provided in Table DSM-21 and section Proposed Updates and Enhancements for Financial Modeling.

NV Energy is proposing to replace the PortfolioPro model with an equivalent ACE guru TM model, which is easier to use and more transparent.⁴⁴ There is no additional financial impact to make this model change. As previously stated, the PortfolioPro model is more than 15 years old, and as technology and software have advanced, the model has created challenges with operation on newer operating systems. Additionally, PortfolioPro has been perceived as a “sophisticated” calculation tool and stakeholders have expressed that the model is more complex and less transparent than is desired. As such, NV Energy is proposing to use a transparent, less complex, and more straightforward cost-effectiveness calculator. The ACE guru model also uses the California Standard Practice Manual and the *National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources*.⁴⁵ The ACE guru model follows generally accepted industry practices for cost effectiveness evaluation of DSM programs. The ACE guru TM model manual is provided in Technical Appendix DSM-19. NV Energy is providing results from each cost effectiveness model in each program data sheet section “Inputs and Outputs.”

From a societal perspective, DSM programs that improve energy efficiency are beneficial as long as their costs are justified by their economic value. However, the benefits of DSM programs may accrue differently to different stakeholders. Cost-benefit analysis based on avoided costs has been widely used in the energy sector to assess the cost effectiveness or net benefits of DSM relative to conventional supply alternatives. When calculating the benefits of DSM, analysts begin with avoided costs and then make adjustments for administrative costs and other costs associated with participating in DSM programs. Depending on the perspective taken in the analysis, competing views about benefits can emerge.

Table DSM-20 below summarizes the potential benefits, the relevant costs, and how each is allocated for the five perspectives and including NTRC. Each assessment begins with the benefits of DSM, measured by NV Energy avoided cost, and subtracts the costs associated with the program, such as equipment, labor, and overhead.

⁴³ Created by the Cadmus Group.

⁴⁴ Created by NV Energy’s M&V contractor, ADM Associates, Inc. (“ADM”).

⁴⁵ NATIONAL EFFICIENCY SCREENING PROJECT, *National Standard Practice Manual*, Edition 1 Spring 2017, available at www.nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM_May-2017_final.pdf.

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From the TRC perspective, an energy-efficient measure fails if the net benefits are negative, meaning that the costs of achieving the savings outweigh the value of the achieved savings. Often a program may pass one test while failing others.

Table DSM-20: Elements of Cost-Effectiveness Tests

| Elements | | NTRC | TRC | RIM | UCT | PCT | SCT |
|----------|--|------|-----|-----|-----|-----|-----|
| Benefits | Avoided Energy Costs | √ | √ | √ | √ | | √ |
| | Avoided Generation Capacity Costs | √ | √ | √ | √ | | √ |
| | Avoided Transmission and Distribution ("T&D") Capacity Costs | √ | √ | √ | √ | | √ |
| | Bill Reductions - Primary Fuel (Electricity) | | | | | √ | |
| | Conservation "Adder" or Externalities (Environmental) | | | | | | √ |
| | Non-Energy Benefits | √ | | | | | √ |
| | Indirect Fuel Benefits (e.g. Gas) | √ | √ | | | | √ |
| | Rebates | | | | | √ | |
| Costs | Implementation Costs | √ | √ | √ | √ | | √ |
| | Direct Customer Costs | √ | √ | | | √ | √ |
| | Utility Program Administration & M&V | √ | √ | √ | √ | | √ |
| | Rebates | | | | √ | | |
| | Reduced Sales | | | √ | | | |

The NTRC test is employed to evaluate the effect of DSM on total outlays for utility services for both participants and non-participants.

The effect of Energy Efficiency programs on utility rates is inferred by the RIM test. The RIM test, also known as the non-participant or "no-loser" test, recognizes the potential for lost revenues and the need for non-participants to subsidize participants through higher utility rates. The test emphasizes the distributional equity effects of DSM. According to this test, demand-side options should be implemented only when the result increases the utility's revenue requirement by an amount less than the increase in revenue requirement associated with various supply-side options. Determination of actual rate impacts provides a more direct measure of equity in DSM investment decisions.

The UCT emphasizes the employment of utility resources to test cost effectiveness. According to this test, demand-side options should be implemented when the utility's portion of DSM costs is justified by the value of acquired conservation resources. This test does not take into account lost sales resulting from DSM.

The PCT evaluates whether customers are sufficiently motivated to participate in DSM programs by virtue of the net benefits of participation.

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Finally, the SCT is a measure of complete societal benefits of demand-side management including indirect benefits such as those arising from avoided environmental externalities caused by emissions.

A more detailed description of the PortfolioPro and ACE guru TM models and user guides are provided in Technical Appendices DSM-1 and DSM-19, respectively. NV Energy, as part of its filing, has included the ACE guru TM program output sheets and each of the five cost tests, including NTRC for 2020. Additionally, the ACE guru TM 2022 through 2024 program output sheets for comparison to the Portfolio Pro output sheets are provided in Technical Appendix DSM-26. The basic financial inputs to the models are provided in Table DSM-21 below.

Table DSM-21: DSM Programs Cost/Benefit Financial Model Basic Inputs

| Input Description | Financial Data |
|--|-----------------------|
| Nevada Power | |
| Discount Rate | 7.14% |
| Rate Escalator | 0.00% |
| Inflation Rate (T&D) | 2.00% |
| Line Loss - Energy | 4.77% |
| Line Loss - Demand | 9.93% |
| T&D Avoided Capacity Cost \$/MW | \$52.16 |
| Environmental Adder | 10.00% |
| Non-Energy Benefit Adder - Energy Education | 24.49% |
| Non-Energy Benefit Adder - Direct Install | 15.06% |
| Non-Energy Benefit Adder - Energy Assessments | 15.08% |
| Non-Energy Benefit Adder - Energy Reports | 15.00% |
| Non-Energy Benefit Adder - Residential Air Conditioning | 15.16% |
| Non-Energy Benefit Adder - Energy Efficient Pool Pumps | 15.06% |
| Non-Energy Benefit Adder - Residential Lighting | 15.00% |
| Non-Energy Benefit Adder - Residential Demand Response | 16.02% |
| Non-Energy Benefit Adder - Low Income (standalone program) | 25.00% |
| Non-Energy Benefit Adder - Schools Program | 10.00% |
| Non-Energy Benefit Adder - Commercial Demand Response | 10.00% |
| Non-Energy Benefit Adder - Business Energy Services | 10.00% |
| Electric Rate - Commercial (\$/kWh) | \$0.07300 |
| Electric Rate - Residential (\$/kWh) | \$0.09914 |
| Gas Rate - Commercial (\$/therm) | \$0.61365 |
| Sierra | |
| Discount Rate | 6.75% |
| Rate Escalator | 0.00% |
| Inflation Rate (T&D) | 2.00% |
| Line Loss - Energy | 6.30% |
| Line Loss - Demand | 14.31% |
| T&D Avoided Capacity Cost \$/MW | \$46.75 |
| Environmental Adder | 10.00% |
| Non-Energy Benefit Adder - Energy Education | 19.58% |
| Non-Energy Benefit Adder - Direct Install | 15.02% |

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| Input Description | Financial Data |
|--|-----------------------|
| Non-Energy Benefit Adder - Energy Assessments | 15.01% |
| Non-Energy Benefit Adder - Energy Reports | 15.00% |
| Non-Energy Benefit Adder - Residential Lighting | 15.00% |
| Non-Energy Benefit Adder - Residential Demand Response | 15.04% |
| Non-Energy Benefit Adder - Low Income (standalone program) | 25.00% |
| Non-Energy Benefit Adder - Schools Program | 10.00% |
| Non-Energy Benefit Adder - Commercial Demand Response | 10.00% |
| Non-Energy Benefit Adder - Business Energy Services | 10.00% |
| Electric Rate - Commercial (\$/kWh) | \$0.06277 |
| Electric Rate - Residential (\$/kWh) | \$0.08480 |
| Gas Rate - Commercial (\$/therm) | \$0.41575 |

Proposed Updates and Enhancements for Financial Modeling

The value of avoiding the Companies’ operating reserves was included for all programs for 2020. When a DSM program is executed, both demand and the reserve requirement associated with that demand are avoided.⁴⁶ The reduction in reserve requirement is accounted for in the modeling process by increasing the demand savings by 16 percent for NV Energy.

The determination of what constitutes a rebate (transfer payment) or an incentive was made based on the guidelines set forth in Decision No. 07-09-043 issued September 20, 2007, by the California Public Utilities Commission (“CPUC”). Decision No. 07-09-043 resulted in several adjustments to the California Standard Practice Manual.⁴⁷ The adjustments that were made are discussed in more detail in the subsection titled Incentives and Rebates presented later in this section.

The value of avoided T&D costs is updated to accurately represent the cost of avoided investment in T&D and to better align with the values used in other jurisdictions. More details are presented in the ‘Assessment of Savings in Transmission and Distribution Costs’ subsection presented later in this section.

Free-ridership, Spillover, and Net-to-Gross

The Commission approved the results of the 2018 Net-To-Gross (“NTG”) Study in Docket No. 18-06003.⁴⁸ NV Energy completed a 2021 NTG Study for NV Energy’s DSM Plan provided in Technical Appendices DSM-21 and DSM-22. The NTG study was completed in preparation for NV Energy’s DSM Portfolio of current, new, and redesigned programs. The applicable NTG ratios

⁴⁶ See John F. Busch & Joseph Eto, *Estimation of Avoided Costs for Electric Utility Demand-Side Planning*, ENERGY SOURCES, Vol. 18:4 (1996), 473-499. Available at <https://www.tandfonline.com/doi/abs/10.1080/00908319608908783>.

⁴⁷ CALIFORNIA STANDARD PRACTICE MANUAL, ECONOMIC ANALYSIS OF DEMAND-SIDE PROGRAMS AND PROJECTS, Oct. 2001. Available at https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/CPUC_STANDARD_PRACTICE_MANUAL.pdf.

⁴⁸ November 1, 2018, Order.

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for program years 2020 and 2021 in this Report and the applicable NTG ratios for the 2022 through 2024 action plan period are also provided in Table DSM-22 below.

Definitions of free rider, spillover, and NTG are as follows:

- **Free-ridership** – A free rider refers to a program participant who would have done some amount of the program-rebated energy efficient improvement if the program had not been offered.
- **Spillover** – Participant-like spillover refers to the situation where a customer installed equipment through the program and then installed additional efficient equipment of the same type due to program influences.
- **Net-to-Gross** – The NTG ratio (also commonly referred to as NTG factor) is the ratio of net program-attributable savings over program gross savings. The ratio calculated includes program free-ridership and program-induced spillover as shown below.

$$NTG\ ratio = 1 - freeridership\ rate + spillover\ rate$$

Table DSM-22: DSM Programs Net-to-Gross Ratios

| Programs | 2020 NTG [1] | 2021 NTG [1] | 2022 NTG [2] | 2023 NTG [2] | 2024 NTG [2] |
|---|--------------|--------------|--------------|--------------|--------------|
| Nevada Power Net-to-Gross Ratios | | | | | |
| Energy Education - Residential and Kits | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Energy Education - Commercial | 100.0% | 90.0% | 100.0% | 100.0% | 100.0% |
| Energy Assessments | 100.0% | 100.0% | N/A | N/A | N/A |
| Online Energy Assessments | N/A | N/A | 100.0% | 100.0% | 100.0% |
| Energy Reports | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Residential Lighting | 60.0% | 60.0% | N/A | N/A | N/A |
| Residential Equipment and Plug Loads | N/A | N/A | 75.4% | 75.1% | 74.9% |
| Residential Codes and New Construction | N/A | N/A | 70.0% | 70.0% | 70.0% |
| Pool Pumps | 70.0% | 70.0% | N/A | N/A | N/A |
| Low Income | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Residential High Efficiency Air Conditioning | 82.0% | 82.0% | N/A | N/A | N/A |
| In-Home Energy Assessments | N/A | N/A | 100.0% | 100.0% | 100.0% |
| Direct Install | 85.0% | 85.0% | N/A | N/A | N/A |
| Direct Install and Deep Retrofits | N/A | N/A | 81.4% | 82.4% | 83.2% |
| Residential Demand Response - Manage | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Residential Demand Response - Build | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Energy Smart Schools – Capital Projects | 88.1% | 82.0% | 82.0% | 82.0% | 82.0% |
| Energy Smart Schools – Continuous Energy Improvements | N/A | N/A | 100.0% | 100.0% | 100.0% |
| Commercial Services | 90.0% | 90.0% | N/A | N/A | N/A |
| Business Energy Services | N/A | N/A | 65.0% | 65.0% | 65.0% |
| Commercial Demand Response - Manage | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

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| Programs | 2020 NTG [1] | 2021 NTG [1] | 2022 NTG [2] | 2023 NTG [2] | 2024 NTG [2] |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|
| Commercial Demand Response - Build | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Sierra Net-to-Gross Ratios | | | | | |
| Energy Education | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Energy Education - Commercial | 100.0% | 90.0% | 100.0% | 100.0% | 100.0% |
| Energy Assessments | 100.0% | 100.0% | N/A | N/A | N/A |
| Online Energy Assessments | N/A | N/A | 100.0% | 100.0% | 100.0% |
| Energy Reports | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Residential Lighting | 55.0% | 55.0% | N/A | N/A | N/A |
| Residential Equipment and Plug Loads | N/A | N/A | 71.8% | 71.3% | 71.1% |
| Residential Codes and New Construction | N/A | N/A | 70.0% | 70.0% | 70.0% |
| Low Income | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| In-Home Energy Assessments | N/A | N/A | 100.0% | 100.0% | 100.0% |
| Direct Install | 85.0% | 85.0% | N/A | N/A | N/A |
| Direct Install and Deep Retrofits | N/A | N/A | 84.1% | 84.6% | 85.5% |
| Residential Demand Response - Manage | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Residential Demand Response - Build | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Energy Smart Schools - Continuous Energy Improvements and Capital Projects | 83.0% | 83.0% | 100.0% | 100.0% | 100.0% |
| Commercial Services | 74.0% | 74.0% | N/A | N/A | N/A |
| Business Energy Services | N/A | N/A | 57.0% | 57.0% | 57.0% |
| Commercial Demand Response - Manage | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Commercial Demand Response - Build | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

[1] Docket No. 18-06003, Technical Appendix DSM-23, attached to this filing as Technical Appendix DSM-20, Section 1.2, at 2-3.

[2] Technical Appendix DSM-21. For DR programs, the NTG ratios in the table are for energy (kWh) savings only; for demand (kW) savings, the NTG ratios are assessed to be 100 percent.

Assessment of Savings in Transmission and Distribution Costs

The methodology for quantifying T&D capital investment savings generated by DSM energy (kWh) and demand (kW) savings is based on the last adopted marginal cost study filed in Nevada Power's and Sierra's most recent GRCs in Docket Nos. 20-06003 and 19-06002 respectively. Energy efficiency investments, unlike other on-site measures, create permanent reductions in customer demand that allow for the quantification of capacity cost savings. The adopted process values this permanent and ongoing effect of energy-efficient measures by identifying the savings resulting from deferring T&D capital investments over the useful life of the investments.

The 2020 annual revenue requirement for the marginal cost of transmission and distribution facilities, not accounting for the distribution facilities beyond distribution substations, is \$52.16 per MW at Nevada Power and \$46.75 per MW at Sierra, which is used for analysis in the PortfolioPro cost/benefit model in this filing. Due to the large expense and complications involved, NV Energy did not conduct an engineering study of the avoided T&D costs, an alternative method for determining T&D costs for DSM programs.

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The PortfolioPro model calculates peak demand savings for each year of a measure's useful life. That value is then multiplied by the annual T&D revenue requirement per kW to determine the annual avoided T&D value. The revenue requirement is escalated each year by applying the cost construction escalator index. The T&D savings are then computed by determining the present worth of the revenue requirement for each year over the expected useful life of that measure.

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DSM and DR Impacts on Peak Demand and Load Shape

The combined effect of the proposed DSM portfolio will be a flattening of the system load shape and an improvement in system load factor. This effect is driven by the following two primary factors and presented in Table DSM-23 below.

1. Permanent peak demand savings are derived from the coincident peak from energy efficiency programs. Programs such as the Business Energy Services have a significant impact on system peak demand. Cumulative peak demand savings from the energy efficiency measures for 2022 through 2024 are estimated to be 0.6 percent of the projected peak system load on average, for both Nevada Power and Sierra. This translates into approximately 29 MW at Nevada Power and 11 MW at Sierra annually for a peak summer day. The “unimpacted” system load forecast is in the absence of permanent and dispatchable peak demand savings from the DSM programs.
2. Dispatchable peak demand savings are derived from the Residential and Commercial DR Programs. The installed dispatchable portion of peak demand savings (DR Build) in the DSM Plan is projected to add 26 MW at Nevada Power and 4 MW at Sierra each year on a peak day over the planning period. In addition to the incrementally installed DR capacities (DR Build), NV Energy manages (DR Manage) over 206 MW on average at Nevada Power and 18 MW at Sierra, annually over the action plan period. The peak demand savings of the combined DR measures for 2022 through 2024 are estimated to be 4.3 percent for Nevada Power and 1.8 percent of the “unimpacted” system load forecast.

Table DSM-23: 2022-2024 DSM Plan Projected Capacity Savings

| Peak Demand Saving (MW) | 2022 | 2023 | 2024 | 3-Year Average |
|---|--------------|--------------|--------------|-----------------------|
| Nevada Power | | | | |
| Energy Efficiency | 29 | 29 | 30 | 29 |
| Residential and Commercial DR - Manage | 191 | 206 | 221 | 206 |
| Residential and Commercial DR - Build | 26 | 26 | 26 | 26 |
| Total DR Manage and Build | 217 | 232 | 247 | 232 |
| Nevada Power Total MW Reduction | 246 | 261 | 277 | 261 |
| System Peak Demand Forecast (MW) | 5,949 | 6,038 | 6,125 | 6,037 |
| Ratio of EE Saving to Peak Demand (%) | 0.5% | 0.5% | 0.5% | 0.5% |
| Ratio of DR Saving to Peak Demand (%) | 3.6% | 3.8% | 4.0% | 3.8% |
| Ratio of Total Saving to Peak Demand (%) | 4.1% | 4.3% | 4.5% | 4.3% |
| Sierra | | | | |
| Energy Efficiency | 10 | 11 | 11 | 11 |
| Residential and Commercial DR - Manage | 15 | 19 | 20 | 18 |
| Residential and Commercial DR - Build | 4 | 4 | 4 | 4 |
| Total DR Manage and Build | 19 | 23 | 24 | 22 |
| Sierra Total MW Reduction | 30 | 34 | 35 | 33 |
| System Peak Demand Forecast (MW) | 1,801 | 1,840 | 1,876 | 1,839 |
| Ratio of EE Saving to Peak Demand (%) | 0.6% | 0.6% | 0.6% | 0.6% |
| Ratio of DR Saving to Peak Demand (%) | 1.1% | 1.2% | 1.3% | 1.2% |
| Ratio of Total Saving to Peak Demand (%) | 1.6% | 1.8% | 1.9% | 1.8% |

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Energy Savings Curves

The energy savings provided by DSM programs can be represented by an Energy Savings Curve (“Curve”), which is an array of 8,760 values.⁴⁹ Each of the 8,760 hourly values is represented as a fraction of annual energy savings expected to occur in a corresponding hour. In an energy saving curve, the sum of the 8,760 values is equal to 1. For example, if an energy-efficiency measure provides constant and uninterrupted savings during every hour of the year, each of the 8,760 numbers in its Curve has the value of $\frac{1}{8,760}$.⁵⁰ This “flat” Curve, or “constant-savings” Curve, is provided as an example based on the calculated sum of its 8,760 elements is obviously equal to unity.

$$8,760 * \frac{1}{8,760} = 1$$

Curves are an integral component of the M&V reports and the calculation methodology is included in Technical Appendix DSM-17, Section II. The Curves are utilized for the determination of monthly energy savings per rate class and monthly critical peak demand savings per rate class. The appendix of every M&V report includes monthly savings tables for kWh savings and critical peak kW savings. Also included in the appendix of every M&V report is a detailed discussion of the general methodology for identifying and utilizing appropriate Curves to generate the monthly savings tables for kWh savings and critical peak kW savings. Finally, within the main body of every M&V report is a discussion of the development of the specific Curves that are utilized for that particular program.

The Curves generated in M&V analyses are employed in performing the PortfolioPro financial analyses for each program. The M&V contractor provides program-level Curves that are used as inputs for the PortfolioPro financial analyses. The program-level Curve is the weighted average of the various measure-specific or site-specific curves that were employed in the M&V analyses of the program’s specific measures or projects. The weights assigned to measure-specific or project-specific curves are provided by verified ex-post annual energy savings per measure or project. In other words, a given program-level curve is appropriately weighted by using ex-post verified savings determinations from M&V analyses.

For the 2020 DSM programs, the M&V analyses utilize more than 100 different Curves that are either measure-specific or site-specific, including 68 unique curves for Nevada Power’s Commercial Services program, and 40 unique curves for Sierra’s Commercial Services program. Most residential sector Curves are developed from primary data from Nevada customers (i.e., M&V data collected during the evaluation of NV Energy residential programs). M&V data collection may include operation schedules, home envelope characteristics, and monthly usage bills from program participants. The residential lighting curve was developed based on two large metering studies conducted in California.

⁴⁹ There are 365 days per year, multiplied by 24-hours per day, which equals 8,760 hours per year.

⁵⁰ Example, an LED exit sign installed in unconditioned, non-lit space provides constant and uninterrupted savings during every hour of the year and is represented in a flat or constant savings curve.

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- Curves for the non-residential sector incorporate primary data from Nevada customers (i.e., M&V data collected while evaluating NV Energy non-residential programs). Certain non-residential curves also incorporate data derived from the California Commercial End-Use Survey (“CEUS”) published by the California Energy Commission.⁵¹
- NV Energy’s M&V contractor, ADM Associates, Inc. (“ADM”), maintains and continuously refines a library of energy savings Curves that may be used for cost effectiveness calculations, potential studies (especially regarding peak demand reduction) and avoided sales calculations. The first set of energy savings curves, developed in 2010, was heavily reliant on secondary sources. In particular, ADM employed normalized end-use load shapes from the CEUS to characterize impacts of the Business Energy Services program.⁵² In the previous program years, primary data was used to supplement CEUS-derived shapes. However, in 2020, sufficient primary data was collected to enable ADM to generate site-specific Curves for all non-prescriptive sampled projects. ADM has developed generic Curves that were used for 2020 prescriptive lighting projects, Heating Ventilation and Air Conditioning (“HVAC”) projects, and non-sampled projects. Each generic Curve represents a typical 8,760 hourly savings for a given measure, climate, and facility type. ADM’s generic lighting Curves were developed using historical site-specific lighting schedules, while ADM’s generic HVAC Curves were developed using energy simulation models.

The M&V contractor provides numerous quality-control checks to ensure that each of the Curves used in M&V analyses is reasonable and appropriate at the measure level, site level, and program level. The M&V contractor also provides a robust Excel-based platform for disaggregating program-level annual energy savings into 8,760 hourly bins per year and tabulating the per-rate class monthly energy kWh and critical peak demand kW savings that are provided in each M&V report. As described above, these tabulations feed into the creation of program-level Curves that the M&V contractor provides for program analysis, load forecasting, and resource planning.

Incremental Costs

This section discusses how incremental costs, which are used in the financial analysis of each program, are determined. In *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers*, the steps to determine

⁵¹ Available at <http://www.energy.ca.gov/ceus/>.

⁵² The CEUS study is a comprehensive end-use energy study for the commercial sector. As described on the CEUS web site hosted by the California Energy Commission, the CEUS survey “is a comprehensive study of commercial sector energy use, primarily designed to support the state’s energy demand forecasting activities.” More information regarding the CEUS survey can be found on the California Energy Commission’s web site at <http://www.energy.ca.gov/ceus/>.

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increment cost of a measure are detailed.⁵³ The first step in defining incremental costs is to determine the measure cost with respect to a baseline of that same measure. The second step is to determine what alternative action is available for the customer at the time the customer makes a decision to adopt the measure promoted by the DSM program. Defining how the customer's purchase decision is made based on four variables – new, replacement, retrofit, or retire – can determine the incremental cost.

There are two main sources of incremental measure cost values. The first is work completed by agencies such as the California Public Utilities Commission (“CPUC”) and the California Energy Commission in publications such as the California Database for Energy Efficiency Resources (“DEER”), and white papers that utilities prepare for measures not well represented in the standard data sets such as DEER or where previously developed data requires updating. Jurisdictional sources of incremental cost information include DEER, California investor owned utilities’ Workpapers, Michigan Statewide Energy Database, Arkansas Technical Reference Manual, ENERGYSTAR®, and Consortium for Energy Efficiency. The second source of incremental costs is NV Energy and its implementation contractors.

The PortfolioPro model accepts an incremental cost for each measure entered for each program being evaluated. The number of energy-efficient measures that are included in a program determines the manner in which incremental costs are entered in PortfolioPro. When a program has a few measures, each measure is included in the modeling with an incremental cost that is specific to that measure. For programs that have a considerable number of measures, it becomes impractical to develop an incremental cost for each measure individually in the PortfolioPro model. For programs such as Business Energy Services and Energy Efficient Schools, a derived unit of measure can include dozens of measures. The derived unit is equal to 1,000 kWh of energy savings. The incremental cost for a derived unit is calculated based on the weighted average incremental cost of the measure and its individual contribution to the 1,000 kWh. Since the derived unit incremental cost is based on the contribution of each individual measure and the total mix of measures in a program, the derived unit and incremental costs adjusts each program year. The program data sheets provide the determination of the incremental costs for each program.

⁵³ National Action Plan for Energy Efficiency (2008), *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers*. Energy and Environmental Economics, Inc. and Regulatory Assistance Project. Available at https://19january2017snapshot.epa.gov/sites/production/files/2015-08/documents/understanding_cost-effectiveness_of_energy_efficiency_programs_best_practices_technical_methods_and_emerging_issues_for_policy-makers.pdf.

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Incentives and Rebates

This section provides a general description of how NV Energy determines the rebate and incentive values for each of the programs. The discussion first describes the difference between an incentive and a rebate and continues with a description of the numerous factors that are considered in determining the value for rebates and incentives. The following is an excerpt from the CPUC clarification memo on the Standard Practice Manual (“SPM”):

The California SPM uses the term ‘transfer payment’ (“incentive/rebate”) to describe certain demand-side program payments that result in the ‘transfer’ of dollars from all ratepayers to participating customers through a utility program.⁵⁴

These guidelines are used in NV Energy’s cost-effectiveness methodology.

To illustrate how different types of payments made by the utilities may act as a ‘transfer,’ consider there are a variety of utility demand-side programs, the majority of the transfer payments fall into one of three general categories:

- **Category 1:** Payments or bill adjustments (incentives) to participating customers for their behavior (e.g., shedding load during a DR event),
- **Category 2:** Payments (incentives) to “upstream” (manufacturers or distributors) or “midstream” (retailers) third-party entities for equipment,
- **Category 3:** Payments (rebates) made to participating customers for equipment (e.g., direct install or rebates).

For example, most DR program event participation incentives fall into Category 1, while most incentives or rebates provided in energy efficiency and distributed generation programs fall into Categories 2 and 3.

The following cases provide further discussion of how to treat these costs in the calculation of the TRC:

- **Case A** - Rate incentives, which are bill adjustments to customers for behavior, which directly and immediately result in energy savings, represent most closely the transfer-type payments described in the SPM. These payments do not appear as costs in the TRC. Demand response capacity and energy incentives fall in this category.
- **Case B** - Payments to third parties, such as “midstream” or “upstream” payments made directly to manufacturers, distributors, or retailers; or direct installation payments made to third parties that install equipment on a customer’s site. These payments are not transferred from non-participating to participating customers and per the SPM definition, they are not

⁵⁴ Available at <https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=7741>.

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even technically incentives – they are part of the program administrator costs. These payments are made to actors outside the TRC “society,” and they are included in the TRC costs.

- **Case C** - Payments made by the utility directly to customers as rebates (i.e., “downstream” payments). Rebates can appear similar to transfer payments described in Case A above. However, in the case of downstream rebates, the customer has already paid the full incremental measure cost to a retailer, so the full incremental cost of the measure has already left the TRC “society.” Consequently, when the TRC cost is calculated for these “downstream” rebate programs, the full incremental costs represented by the customers’ payments for the products are included as costs.

NV Energy’s Residential and Commercial DR programs are in the “Case A” category. Residential Lighting, Pool Pumps, Direct Install, Energy Education Kits, Energy Reports, and Residential AC programs are in the “Case B” category. Finally, Energy Efficient Schools and Business Energy Services programs are in the “Case C” category.

A rebate or an incentive is paid to influence a customer to become a program participant by taking the action required to justify the payment of the incentive or rebate. The optimum level of a rebate or incentive should be set at the value that results in the desired number of customers becoming program participants. Rebate or incentive amounts might need to be greater than this amount to reduce free-ridership levels, as higher rebates and incentives influence additional customers to become participants who would not have participated in the absence of the higher rebate or incentive. On the other hand, a rebate or incentive that is too low would generally result in higher levels of free-ridership.

Additional factors that are considered in setting rebates and incentives include payback periods, incremental costs, program or measure maturity, experience in the marketplace (either locally or in other states), and the nature and type of the program. It is also noted that the PowerShift Smart Shop is constantly in flux; therefore, the management of rebate and incentive levels requires adjustments to rebate and incentive levels in response to changes in the PowerShift Smart Shop.

Programs are identified as either being a rebate program or an incentive program in the program data sheets. The program data sheets discuss who receives the rebates or incentives paid by the program as well as the logic regarding how rebates or incentives paid for each program are determined. The rebates and incentives may be adjusted during a program year to reflect the response of the PowerShift Smart Shop to the program and to increase the probability of the program meeting or exceeding energy savings and cost-effectiveness goals.

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Measure Life

Measure life, which in energy efficiency is also referred to as EUL, is the estimate of the mean number of years that the measures installed under the program are still in place and operable.⁵⁵ Stated differently, the EUL determines how long energy savings are expected to last once an energy-efficient measure has been installed. EUL is used as an input to the PortfolioPro financial analysis model for determining the cost-benefit ratios and net benefits that can be expected to be realized based on the installation of an energy-efficient measure.

NV Energy obtains EUL values from two sources. The first and primary source for EUL is the M&V report for each program. The M&V report provides the EUL for the plan year that has been evaluated in that M&V report. In preparing the M&V report, the M&V evaluator generally employs one of two methodologies for determining the EUL. The first is to use industry resources, such as the DEER database or Technical Reference Manuals from other jurisdictions. The second methodology is to use data collected during the evaluation of the program to determine the EUL.

Secondary sources are used for the EUL for programs or measures for which no current M&V report is available, or for which there have been program changes such that the EUL from the most recent M&V report does not accurately reflect the changed character of the program or measure. For these situations, NV Energy employs EUL data taken from industry resources, such as the California DEER database or Technical Reference Manuals from other jurisdictions to determine the EUL. The methodology for determining measure life for each program is described in the program data sheet for each program.

Measurement of Units

All of the specific inputs for a measure are entered into PortfolioPro on a per unit basis. The per unit basis is a standard amount of a physical quantity, such as length, mass, energy, etc., and in specified multiples that are used to express magnitudes of that physical quantity. There are two different approaches when defining a unit for entry into PortfolioPro. The first is used when there is a one-to-one relationship between each energy-efficient measure and the units that are entered in PortfolioPro. An example of a one-to-one relationship would be window film. There is no standard window; therefore, the unit that would be used for window film would be a square foot of window film. The incremental cost, energy savings, and rebate amount for the window film would be entered in PortfolioPro on a per square foot basis.

Some programs include measures with varying quantity and diversity characteristics making it impractical to enter them all individually into PortfolioPro. For example, the Business Energy Services program encompasses more than one hundred individual measures. In this instance, derived units are developed on 1 kWh or 1,000 kWh basis. Lighting in the Business Energy Services program provides another good example. Instead of entering distinct types of lighting measures individually, a derived unit is determined based on the number of each of the individual

⁵⁵ See *Action Guide for States: Evaluation, Measurement, and Verification Frameworks—Guidance for Energy Efficiency Portfolios Funded by Utility Customers*, State and Local Energy Efficiency Action Network, January 2018.

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measures that are incorporated in the derived unit. The derived unit can also be applied where a number of measures are described by different units of measure. A derived unit can come from a mix of custom and prescriptive measures with different unit sizes (e.g., square foot of window film, number of fixtures installed, Watts reduced) that would otherwise make the energy efficiency computations by units installed impractical at the program level. It is likely that fractional units will result when derived units are employed to determine the cost effectiveness of program results. For example, 10.5 units will be entered into PortfolioPro for a program with 10,500 kWh of savings with a derived unit of 1,000 kWh. The units that are employed for the cost effectiveness evaluation of each individual program are discussed in the program data sheet for that program.

Energy Savings

The energy savings discussed in this section are used for the projections of energy savings in future years, in the case of this filing, primarily for the 2022 through 2024 action plan period. Energy savings for future years may be the same as those determined in an M&V report for previous years, or be a projection based on the M&V results from previous years, modified to reflect changed program parameters, or other industry sources adjusted to reflect the specific conditions under which the measures or programs will be deployed. For some measures or programs, using only M&V verified savings from previous years without adjusting the energy savings for future years can lead to an over- or under-estimation of future energy savings.

Where there will be no significant changes in a program's measures or measure mixes in future years, historical energy savings from prior M&V reports provide a good projection of expected savings for future years. While optimal, this method for determining energy savings for future program years is only applicable for measures or programs that are static in terms of the measures mix or external factors that impact or change future energy savings. In addition, when new measures or a new program are added for which measured and verified results are not available, other sources must be used to determine ex-ante estimated savings for the analysis of the program or measure.

The measure mix or features of the measures of a program can change over time. Changes can be driven by the market, updates to codes and standards, and modifications to measures made by manufacturers. Customers whose tastes or desires evolve over time drive changes in the PowerShift Smart Shop. As tastes and desires evolve, the products that were purchased in large numbers in one year may not be purchased at the same level in future years. Measures change over time both in terms of price and in performance. For example, since variable speed drive motors have become less expensive over time, they are now manufactured for smaller motors.

The M&V report is the starting point for determining energy savings for measures and programs for future years. The analysis must then examine implemented or potential changes to codes and standards to adjust the energy savings per measure. The behaviors of the PowerShift Smart Shop should then be forecasted to account for how the market will react to the changes in codes and standards. This analysis is simple for some programs, but can be somewhat involved for a program, such as the Business Energy Services program, which includes dozens of measures for which the

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savings per measure and the number of measures that will be accepted by the PowerShift Smart Shop are evolving.

For new programs or measures for which NV Energy does not have M&V results, other sources are used to project energy savings. The sources used will vary by the quality of the data available. The DEER database is a comprehensive collection of energy efficiency data and a good resource for this information. M&V reports, evaluation studies, and technical reference manuals from other jurisdictions also provide a good source of energy savings data. When using such third-party data, NV Energy utilizes results that have been determined or corroborated by third party analysts whose work has generally been validated through a formal review process.

The determination of the savings for each program follows the process outlined in this discussion. The specific determination of savings is unique for each program and is provided in the program data sheet.

Program Management and Tracking

NV Energy primarily uses two software systems that assist with program management and data tracking:

1. DRMS (software),
2. Demand Side Management Central (“DSMC”) (database).

DSMC is the software that supports Evaluation, Measurement, and Verification (“EM&V”) activities by managing the data needed for Energy Conservation Measure (“ECM”) sample selection and verification of savings data. DRMS is the NV Energy enterprise software system that enables DR program management and the dispatch of customer systems in an aggregated fashion that reduces load at times of peak electricity demand.

The central system of record for ECM data tracking and reporting is contained with DSMC. DSMC manages the association of ECMs with approved programs and tracks data across the DSM program lifecycle. Key data tracked by DSMC includes the implementation of ECMs, program performance, evaluation support, and M&V activities. DSMC provides the ex-ante estimated energy savings (i.e., pre-verified energy savings) and installation dates and is populated monthly with program data from either the implementation contractor or program manager.

NV Energy uses this business process management and program performance-tracking tool throughout the year to ensure that the planned investments provide clear value. DSMC is refreshed monthly with customer data from NV Energy’s customer information systems. In parallel, project, and ECM data are submitted electronically by implementation contractors or program managers each month. Program managers review the loaded projects in DSMC to ensure data accuracy and integrity.

DRMS provides a wide range of functions performing DR-related program management tasks including customer program management, work management for field services, device

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management, grid location mapping, event management, forecasting, event strategy optimization, and reporting. It manages a range of load management device types and energy management systems via supervision and control of Load Management Systems, a Device Manager, and an Open Automated Demand Response (“OpenADR”) Server. The system has many functions for tracking and interacting with assets associated with behind-the-meter customer programs. Additionally, the workflow engines in DRMS have been adapted to support the delivery of integrated energy efficiency and DR program processes.

DSMC and DRMS improve the efficiency of program management and streamline reporting. Both systems are based upon process automation technologies and can be adapted and updated with new business processes to help manage an evolving portfolio of integrated DSM programs.

Evaluation, Measurement, and Verification

EM&V for NV Energy’s DSM programs is the process of using measurements and analysis to document the savings achieved with a program and to determine whether the energy (kWh) and demand (kW) savings goals for the program were met. The results are based on measures that were implemented at customer sites that participated in NV Energy’s DSM programs. The evaluation effort also provides feedback that enables NV Energy to improve the effectiveness and delivery of each program in future years.

NV Energy uses a process that employs generally accepted industry standards and procedures. The M&V work is performed by an independent, third-party EM&V contractor with experience in applying industry standards and procedures. NV Energy has committed to using best EM&V practices for three reasons. First, M&V provides systematic measurement of the performance of energy efficiency programs and technologies. Second, evaluation provides objective data for assessing program performance rather than relying on anecdotal evidence and personal impressions. Third, engineering methods and technical data provide valid, reliable results that provide a basis for benchmarking and comparing Nevada Energy’s energy efficiency programs against those of other utilities.

Conceptually, determining energy savings involves comparing energy use before installation of an energy conservation measure, known as the baseline energy use, and energy use after installation of the measure, known as post-installation energy use. However, estimating savings by simply subtracting post-installation energy use from the pre-installation energy use does not account for the impacts of other factors, such as differences in weather or occupancy. Adjustments must be made for factors, such as weather and usage factors. In general terms:

$$\text{Savings} = (\text{Baseline energy use}) - (\text{Post-installation energy use}) + \text{Adjustments}$$

The adjustments term allows energy use during the two periods to be compared under the same set of conditions. These adjustments are generally made to restate baseline energy use or demand under post-retrofit conditions.

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Following the taxonomy presented in the Energy Efficiency Program Impact Evaluation Guide,⁵⁶ there are three major approaches for calculating estimates of energy savings and demand reductions.

⁵⁶ State and Local Energy Efficiency Action Network. 2012. *Energy Efficiency Program Impact Evaluation Guide*. Prepared by Steven R. Schiller, Schiller Consulting, Inc., available at www.seeaction.energy.gov.

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A site-specific M&V approach involves:

1. Selecting a representative sample of customers or sites that participated in a program.
2. Determining the savings for each customer or site in the sample, usually by using one or more of M&V Options defined in the International Performance Measurement and Verification Protocol⁵⁷ (“IPMVP”). The IPMVP Options that can be used are summarized in Table DSM-24.
3. Apply the results of savings estimates from the sample to the entire population in the program.

A deemed savings approach involves using stipulated savings for energy conservation measures for which savings values are well known and documented. For example, this approach may be acceptable for lighting retrofits in customers’ spaces such as offices where there is general agreement on the hours of use for such spaces.

A large-scale data analysis approach involves estimating energy savings and demand reductions by applying one or more statistical methods to measured energy consumption, which is typically utility meter billing data, and independent variable data. This approach usually (a) involves analysis of a census of program sites versus a sample; and (b) does not involve onsite data collection for model calibration. However, a sample of customers or sites may be selected for a visit to confirm the measures were properly installed and are operational. A more detailed description of the ‘M&V Process’ is provided in Technical Appendix DSM-04.

Table DSM-24: IPMVP Options

| IPMVP Option | How Savings Are Calculated |
|--|---|
| Option A: Retrofit Isolation - Based on measured equipment performance, measured or stipulated operational factors, and annual verification of potential to perform. | Engineering calculations using short-term measured data and stipulations. |
| Option B: Retrofit Isolation - Based on periodic or continuous measurements taken at the device or system level. | Engineering calculations using measured data. |
| Option C: Whole Facility - Based on whole building or facility level utility meter or sub-metered data adjusted for weather and / or other factors. | Analysis of utility meter data. |
| Option D: Calibrated Simulation - Based on a computer simulation of a building or process. | Compare pre and post simulation models with calibrated measured data. |

⁵⁷ IPMVP *Core Concepts*, may be downloaded at www.evo-world.org by establishing a free account. (The similar 2012 IPMVP version is available at www.eepperformance.org/uploads/8/6/5/0/8650231/ipmvp_volume_i_2012.pdf.)

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Education Services Programs

Section 5 – Education Services Programs

Education Services Overview

The Education Services programs focus on outreach, engagement, and education efforts that inform customers on how they can more efficiently use energy. These efforts foster increased participation in DSM program incentives, rebates, and services, while encouraging customers to make energy smart purchases and decisions. The Commission has noted in its previous Orders that education about energy use is a vital part of promoting awareness of energy efficiency opportunities.⁵⁸ Thus, energy education is an important and integral part of the DSM portfolio as it provides a foundation to promote increased awareness of how homes and businesses use energy. Education efforts endeavor to have a proactive impact on the customer's practices and patterns, which leads to enhanced energy efficiency and savings that support overall DSM program goals and initiatives.

NV Energy bundled the Home Services programs for its 2018 DSM IRP for program years 2019 through 2021 to include the following four programs: (1) Energy Reports, (2) Energy Education, (3) Energy Assessments, and (4) Program Development.

NV Energy is proposing the following four Education Services programs as part of its 2022 through 2024 action plan period: (1) Energy Reports; (2) Online Energy Assessments, (3) Energy Education (with energy saving kits); and (4) Program Development. For NV Energy's proposed DSM plan, the Companies are bifurcating the Energy Assessments program into two programs, Online Energy Assessment and In-home Energy Assessments. The In-Home Energy Assessments program was moved to Residential Services.

The Education Services programs are a multi-faceted approach intended to impact the customer's perceptions about their energy use and to impart knowledge and information about how they can save energy and money. Together, the programs complement each other by appealing to customers via specific outreach and communications. The Education Services programs' goal is to focus on achieving increased awareness and to create a bridge to participation in other NV Energy DSM products and services.

The proposed budgets, energy (kWh) and demand (kW) savings for the programs for the 2022 through 2024 action plan period are provided in Table DSM-25 below.

⁵⁸ Dockets Nos. 15-06065, 15-07004, and 15-08011 (Nevada Power's 2015 Integrated Resource Plan and Sierra's Annual DSM Update Report), February 12, 2016, Order at 21, para. 60.

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Education Services Programs

Table DSM-25: 2022-2024 Education Services Proposed Budgets and Savings Targets

| Programs | Proposed Budget | Annual Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Annual Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Annual Demand Savings (kW) | Annual Energy Savings (kWh) |
|--|------------------------|-----------------------------------|------------------------------------|------------------------|-----------------------------------|------------------------------------|------------------------|-----------------------------------|------------------------------------|
| Nevada Power | 2022 | | | 2023 | | | 2024 | | |
| Energy Education | \$450,000 | 72 | 600,000 | \$450,000 | 72 | 600,000 | \$450,000 | 72 | 600,000 |
| Energy Reports | \$725,000 | 4,445 | 11,600,000 | \$725,000 | 4,445 | 11,600,000 | \$725,000 | 4,445 | 11,600,000 |
| Online Energy Assessments | \$1,050,000 | 0 | 0 | \$1,050,000 | 0 | 0 | \$1,050,000 | 0 | 0 |
| Program Development | \$200,000 | 0 | 0 | \$200,000 | 0 | 0 | \$200,000 | 0 | 0 |
| Nevada Power Education Services Total | \$2,425,000 | 4,517 | 12,200,000 | \$2,425,000 | 4,517 | 12,200,000 | \$2,425,000 | 4,517 | 12,200,000 |
| Sierra | 2022 | | | 2023 | | | 2024 | | |
| Energy Education | \$310,000 | 51 | 400,000 | \$310,000 | 51 | 400,000 | \$310,000 | 51 | 400,000 |
| Energy Reports | \$390,000 | 2,539 | 7,100,000 | \$390,000 | 2,539 | 7,100,000 | \$390,000 | 2,539 | 7,100,000 |
| Online Energy Assessments | \$420,000 | 0 | 0 | \$420,000 | 0 | 0 | \$420,000 | 0 | 0 |
| Program Development | \$70,000 | 0 | 0 | \$70,000 | 0 | 0 | \$70,000 | 0 | 0 |
| Sierra Education Services Total | \$1,190,000 | 2,590 | 7,500,000 | \$1,190,000 | 2,590 | 7,500,000 | \$1,190,000 | 2,590 | 7,500,000 |
| NV Energy | 2022 | | | 2023 | | | 2024 | | |
| Energy Education | \$760,000 | 123 | 1,000,000 | \$760,000 | 123 | 1,000,000 | \$760,000 | 123 | 1,000,000 |
| Energy Reports | \$1,115,000 | 6,984 | 18,700,000 | \$1,115,000 | 6,984 | 18,700,000 | \$1,115,000 | 6,984 | 18,700,000 |
| Online Energy Assessments | \$1,470,000 | 0 | 0 | \$1,470,000 | 0 | 0 | \$1,470,000 | 0 | 0 |
| Program Development | \$270,000 | 0 | 0 | \$270,000 | 0 | 0 | \$270,000 | 0 | 0 |
| NV Energy Education Services Total | \$3,615,000 | 7,107 | 19,700,000 | \$3,615,000 | 7,107 | 19,700,000 | \$3,615,000 | 7,107 | 19,700,000 |

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Energy Education Program Data Sheet**

2020-2024 Energy Education Program

Description

The Energy Education program (“Program”) provides educational tools and tips to NV Energy’s residential and small commercial customers to encourage them to keep energy efficiency and savings opportunities in mind. Through strategic outreach initiatives supported by PowerShift by NV Energy, the Program leverages various touchpoints to inform and educate customers about ways to better manage their usage and take actions that help them save on their utility bills. This strategic outreach not only endeavors to foster awareness and participation in DSM and energy efficiency offerings, it strives to maintain on-going communication with customers, while positioning the Companies as a reliable resource and partner to help them maximize their energy savings.

The Program considers the unique perspective of all NV Energy customers and tailors outreach initiatives and touchpoints to communicate with audiences such as (1) teachers, (2) students, (3) seniors, (4) homeowners, (5) renters, (6) builders, (7) developers, (8) realtors, and (9) energy professionals. To actively and effectively engage with these audiences, PowerShift by NV Energy activities include: participation in community and non-profit sponsored events to interact with residential customers with a focus on low-income and seniors, participation in events at schools to reach students and teachers; and development of online offerings, such as webinars, to reach businesses, builders, realtors and energy professionals. The Program provides energy efficiency information and PowerShift offerings when possible to continually educate customers and the community about energy savings benefits to homes and businesses. This outreach is also complemented by a PowerShift campaign that relies on other communication tactics deployed when circumstances warrant.

2020 Results

The expenditures, demand and energy savings, and participant results for the Program for the 2020 program year are provided in Table DSM-26 below.

Table DSM-26: 2020 Energy Education Expenditures, Savings, and Participants Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|--------------------------------------|----------------|-----------|----------------------------------|-------------|----------|----------------------------------|------------|----------|----------------------------------|--------------|----------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Energy Education - Residential | \$400,000 | \$137,758 | (65.6%) | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 61,300 | 20,707 | (66.2%) |
| Energy Education - Kits | \$0 | \$0 | 0.0% | 240,000 | 316,205 | 31.8% | 23 | 35 | 53.5% | 700 | 688 | (1.7%) |
| Energy Education - Commercial | \$200,000 | \$93,773 | (53.1%) | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 3,000 | 6,542 | 118.1% |

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| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|--------------------------------------|--------------------|------------------|----------------------------------|----------------|----------------|----------------------------------|------------|-----------|----------------------------------|----------------|---------------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power Total | \$600,000 | \$231,532 | (61.4%) | 240,000 | 316,205 | 31.8% | 23 | 35 | 53.5% | 65,000 | 27,937 | (57.0%) |
| Sierra | | | | | | | | | | | | |
| Energy Education - Residential | \$285,000 | \$96,391 | (66.2%) | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 32,600 | 3,624 | (88.9%) |
| Energy Education - Kits | \$0 | \$0 | 0.0% | 120,000 | 188,021 | 56.7% | 13 | 21 | 64.7% | 400 | 396 | (1.0%) |
| Energy Education - Commercial | \$190,000 | \$49,469 | (74.0%) | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 2,000 | 2,857 | 42.9% |
| Sierra Total | \$475,000 | \$145,861 | (69.3%) | 120,000 | 188,021 | 56.7% | 13 | 21 | 64.7% | 35,000 | 6,877 | (80.4%) |
| NV Energy | | | | | | | | | | | | |
| Energy Education - Residential | \$685,000 | \$234,150 | (65.8%) | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 93,900 | 24,331 | (74.1%) |
| Energy Education - Kits | \$0 | \$0 | 0.0% | 360,000 | 504,226 | 40.1% | 36 | 56 | 57.5% | 1,100 | 1,084 | (1.5%) |
| Energy Education - Commercial | \$390,000 | \$143,243 | (63.3%) | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 5,000 | 9,399 | 88.0% |
| NV Energy Total | \$1,075,000 | \$377,392 | (64.9%) | 360,000 | 504,226 | 40.1% | 36 | 56 | 57.5% | 100,000 | 34,814 | (65.2%) |

2020 Overall Results and Activities

To adapt to health and safety guidelines associated with the COVID-19 pandemic, the Program participated in various social distancing or “touchless” events throughout its service territories. These touchless events included drive-thru community outreach events for school supplies, food distribution, and senior-specific distribution events wherein PowerShift education materials and items were dispersed, online Zoom (and other audio and video conferencing platforms) presentations, and the EnergySmart Educator program delivered in partnership with Desert Research Institute.

The Energy Kits (“Kits”) are the only component of the Program claiming energy savings. The Kits were designed to generate energy savings by mailing energy efficient measures directly to customers. Customers who had previously contacted the Companies for billing payment assistance were the target audience as they had proactively engaged with NV Energy. An email was sent to the customer to gauge interest in receiving a Kit. The Kit was mailed to the customer if the customer was interested and a survey followed to measure customer satisfaction with the Kit. The Kits contained:

- Four 15-watt LED light lamps;
- Two advanced power strips;

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- Instructions for proper installation of the measures;
- A PowerShift brochure, which included a description of all DSM programs, energy saving tips, and a contact number for customers to call for questions or measure installation instructions.

For small commercial customers, NV Energy's Business Energy Services Lunch and Learn events shifted to webinars rather than in-person. Topics presented included Optimized Lighting Technology, Electrification of Buildings and Retro Commissioning.

For builder support education focus, the Program provided a variety of impactful educational webinars. Webinars presented focused on building to code standards, market trends and net zero building trends. The Program also presented an eBook on Nevada Energy Building Trends to these customers.

Upon the suspension of in-person community events, NV Energy actively participated in several drive-thru events, including food drives for seniors and school supply drives for students. PowerShift collateral was distributed to promote DSM programs and explain how NV Energy customers could qualify for and participate in specific program offerings.

Furthermore, NV Energy participated in Zoom and online presentations as requested by community partners to discuss DSM programs and educate attendees about energy efficiency. This included events for various Chambers of Commerce and for the EnergySmart Educator Program.

2020 Lessons Learned and Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years.

- Pursuant to the order in Docket No. 19-07004, the distribution of Kits was changed in program year 2020.⁵⁹ The Program adopted an opt-in methodology that would be implemented at various community outreach events. To comply with COVID-19 safety guidelines, this methodology was changed, so that customers could opt-in to receive the Kit via an email invitation. This method proved to be an effective way to distribute the Kits and is the recommended distribution method in 2021.
- Quarterly results memos from the independent third-party M&V contractor, ADM, helped NV Energy implement real-time Program improvements or course corrections. This proved to be effective in 2020 and will continue in 2021.

⁵⁹ December 24, 2019, Order at 4-5.

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2021 Plan

For the 2021 program year, the authorized budgets, projected demand and energy savings targets, and participant goals for the Program are provided in Table DSM-27 below.

Table DSM-27: 2021 Energy Education Authorized Budgets, Savings Targets, and Participant Goals

| 2021 Program Components | Authorized Budgets | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------|---------------------------|--|---|-------------------------|
| Nevada Power | | | | |
| Energy Education - Residential | \$400,000 | 0 | 0 | 61,300 |
| Energy Education - Kits | \$0 | 27 | 240,000 | 700 |
| Energy Education - Commercial | \$200,000 | 0 | 0 | 3,000 |
| Nevada Power Total | \$600,000 | 27 | 240,000 | 65,000 |
| Sierra | | | | |
| Energy Education - Residential | \$285,000 | 0 | 0 | 32,600 |
| Energy Education - Kits | \$0 | 14 | 120,000 | 400 |
| Energy Education - Commercial | \$190,000 | 0 | 0 | 2,000 |
| Sierra Total | \$475,000 | 14 | 120,000 | 35,000 |
| NV Energy | | | | |
| Energy Education - Residential | \$685,000 | 0 | 0 | 93,900 |
| Energy Education - Kits | \$0 | 41 | 360,000 | 1,100 |
| Energy Education - Commercial | \$390,000 | 0 | 0 | 5,000 |
| NV Energy Total | \$1,075,000 | 41 | 360,000 | 100,000 |

The delivery of education for the portfolio of programs will include, but will not be limited to, targeted outreach to residential customers through a variety of channels such as social media, community events, senior-citizen targeted events in low-income communities, senior energy assistance events, the Live Theatre Performance program in schools, the EnergySmart Educator program, and community events presentations.

Similar to 2020, the Kit component will be implemented through a customer opt-in method and will be offered to customers seeking billing assistance and/or payment arrangements. NV Energy will continue to provide customers with the opportunity to take an online survey to provide feedback on the Kit's contents and usefulness. This targeted outreach leverages customer interactions, while supporting overall DSM program objectives to help customers save energy.

The Program will continue to be implemented similar to 2020 until COVID-19 restrictions are lifted. Once restrictions are lifted, the Program will resume attending in-person community outreach events. The Program will also continue to offer monthly tips for all customers through social media outlets and will continue to reach small commercial customers through channels, such as Chamber of Commerce events, commercial outreach events, Business Energy Services Lunch and Learn presentations, webinars, and eBooks.

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2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year.

- New measures will be added to the Kits to replace Light Emitting Diode (“LED”) lighting. The Kit measures will be determined by the second quarter of 2021.
- Due to the lingering impact of COVID-19 on communities and the suspension of in-person outreach events, the 2021 EnergySmart Educator Program will experience many of the same challenges as in 2020. Due to safety guidelines, it will be difficult for Desert Research Institute (“DRI”) to administer the distribution of Green Boxes. The Green Box program provides self-contained science teaching kits directly to teachers. Each Kit provides educators with detailed lesson plans, consumable and non-consumable materials, and a variety of teaching aids (e.g., worksheets, game pieces).
- In lieu of the Green Boxes, DRI will host an Energy Smart Education Week in the spring, which will be delivered through curricular resources and activities, professional development for educators, and community events. In the event in-person gatherings remain unavailable, DRI will deliver these programs in-person when possible and utilize online platforms for virtual engagement, as needed.
- NV Energy will virtually engage with customers as the Companies continue to navigate the challenges of COVID-19 throughout Nevada communities. This includes online presentations regarding Powershift programs, offerings, and educational opportunities that encourage our customers to save energy.

2022-2024 Proposed Plan

For the 2022 through 2024 program years, the proposed budget, projected demand and energy savings, and participant goals for the Program are provided in Table DSM-28 below.

Table DSM-28: 2022-2024 Energy Education Proposed Budgets, Savings Targets, and Participant Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------|------------------|-----------------------------------|------------------------------------|------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Energy Education - Residential | \$280,000 | 0 | 0 | 19,209 |
| Energy Education - Kits | \$0 | 72 | 600,000 | 2,791 |
| Energy Education - Commercial | \$170,000 | 0 | 0 | 18,000 |
| Nevada Power Total | \$450,000 | 72 | 600,000 | 40,000 |
| Sierra | | | | |

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| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------|------------------|-----------------------------------|------------------------------------|------------------|
| Energy Education - Residential | \$180,000 | 0 | 0 | 14,000 |
| Energy Education - Kits | \$0 | 51 | 400,000 | 1,860 |
| Energy Education - Commercial | \$130,000 | 0 | 0 | 4,000 |
| Sierra Total | \$310,000 | 51 | 400,000 | 19,860 |
| NV Energy | | | | |
| Energy Education - Residential | \$460,000 | 0 | 0 | 33,209 |
| Energy Education - Kits | \$0 | 123 | 1,000,000 | 4,651 |
| Energy Education - Commercial | \$300,000 | 0 | 0 | 22,000 |
| NV Energy Total | \$760,000 | 123 | 1,000,000 | 59,860 |
| 2023 | | | | |
| Nevada Power | | | | |
| Energy Education - Residential | \$280,000 | 0 | 0 | 19,209 |
| Energy Education - Kits | \$0 | 72 | 600,000 | 2,791 |
| Energy Education - Commercial | \$170,000 | 0 | 0 | 18,000 |
| Nevada Power Total | \$450,000 | 72 | 600,000 | 40,000 |
| Sierra | | | | |
| Energy Education - Residential | \$180,000 | 0 | 0 | 14,000 |
| Energy Education - Kits | \$0 | 51 | 400,000 | 1,860 |
| Energy Education - Commercial | \$130,000 | 0 | 0 | 4,000 |
| Sierra Total | \$310,000 | 51 | 400,000 | 19,860 |
| NV Energy | | | | |
| Energy Education - Residential | \$460,000 | 0 | 0 | 33,209 |
| Energy Education - Kits | \$0 | 123 | 1,000,000 | 4,651 |
| Energy Education - Commercial | \$300,000 | 0 | 0 | 22,000 |
| NV Energy Total | \$760,000 | 123 | 1,000,000 | 59,860 |
| 2024 | | | | |
| Nevada Power | | | | |
| Energy Education - Residential | \$280,000 | 0 | 0 | 19,209 |
| Energy Education - Kits | \$0 | 72 | 600,000 | 2,791 |
| Energy Education - Commercial | \$170,000 | 0 | 0 | 18,000 |
| Nevada Power Total | \$450,000 | 72 | 600,000 | 40,000 |
| Sierra | | | | |
| Energy Education - Residential | \$180,000 | 0 | 0 | 14,000 |
| Energy Education - Kits | \$0 | 51 | 400,000 | 1,860 |
| Energy Education - Commercial | \$130,000 | 0 | 0 | 4,000 |
| Sierra Total | \$310,000 | 51 | 400,000 | 19,860 |
| NV Energy | | | | |
| Energy Education - Residential | \$460,000 | 0 | 0 | 33,209 |
| Energy Education - Kits | \$0 | 123 | 1,000,000 | 4,651 |
| Energy Education - Commercial | \$300,000 | 0 | 0 | 22,000 |
| NV Energy Total | \$760,000 | 123 | 1,000,000 | 59,860 |

For the 2022 through 2024 program years, the Program is designed to provide education on energy efficiency topics. The overall goal of the Program is to educate residential and small commercial

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customers about the benefits of energy efficiency in their homes and their businesses. The Program consists of three components: residential customer education, small commercial customer education and the kits.

The Program will leverage all communication, outreach, and customer engagement platforms in support of its goal to increase awareness of PowerShift products and services and to help all customers save energy and money.

The Program will offer a Kit to its residential customers and will be targeted to customers seeking billing assistance and/or payment arrangements. In addition to energy saving measures, the Kits will contain information about all DSM Program offerings and energy saving tips.

The Program will partner with DRI to provide an EnergySmart Educator Program. This Program would consist of energy efficiency and conservation education to teachers and should include a Green Box Program which provides self-contained science teaching kits directly to the teachers. Each kit would provide educators with detailed lesson plans, consumable and non-consumable materials, and a variety of teaching aids (e.g., worksheets, game pieces). Kits would be reserved online and sent to the school. After use, the Green Box is returned to DRI and the teacher can then reserve another Green Box.

The Program will provide a Live Theatre In-School Performance Program. This program would be focused on educating elementary students in schools within the Companies' serviced territories on energy efficiency and conservation, thereby enabling and motivating students, and teachers to understand and educate their families about reducing their energy consumption and utility bills.

2022-2024 Proposed Plan Enhancements

The following are the proposed Program plan enhancements that will be implemented during the 2022 through 2024 program years:

- The Program will partner with the Low Income, the Residential High Efficiency AC, and Energy Smart Schools Programs to reach out to low-income customers. Additionally, the Program will partner with NV Energy Community Relations and Government Affairs departments to identify the needs of the Nevada community and where the Program should go to provide an educational Powershift event to describe, demonstrate and sign-up customers. These events will take place at senior centers, school gymnasiums or at the request of governmental constituents. These roadshow events will take place quarterly or, if the need is greater, monthly.
- The Program will explore utilizing a QR ("Quick Response") code to enable customers to interact with NV Energy via their mobile devices and to support outreach and education efforts.
- The Program will explore offering a Kit's school component to promote kWh savings and reducing energy costs for students and their families. This will be targeted to Title 1

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schools. Title 1 schools are those that are populated with large concentrations of low-income students that receive supplemental funds to assist in meeting student's educational needs.

- The Program will partner with members of the Clean Energy team at educational events so customers are aware of all available NV Energy programs.
- The Program will partner with the Energy Smart Schools Program to provide a video to teachers to educate students about energy efficiency at home. A pamphlet will be provided giving teachers the tools to be more energy efficient and aware of how they can save energy in the classroom and at home. A packet will also be provided to teachers to distribute to students. These packets will include a workbook and activities for students to take home to their family and complete. When the assignments are completed and returned to the teacher, a reward will be given to the student.

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-05 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-05 and DSM-17, which are calculated by the third-party evaluator, ADM.

Incremental Costs

There were no incremental costs or out-of-pocket expenses to the customers in this Program.

Incentives/Rebates

The Program offers Kits that include electric efficiency savings measures. The cost per individual Kit was \$36.20 for Nevada Power and \$38.35 for Sierra, not including shipping.

Measure Life

As determined in the M&V Report, the EUL for this program was 10.5 years for Nevada Power and 10.6 years for Sierra.

Measure Units

A unit of measurement is defined by a complete energy savings Kit. For the Energy Education component, each unit is measured as a participant.

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Education Program Data Sheet

Savings

The verified energy savings for energy education kits were 460 kWh per unit for Nevada Power and 475 kWh for Sierra.

Financial Analysis

Financial assumptions are provided in Section 4 of this DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program has an overall cost effectiveness NTRC score for 2020 of 0.59 for Nevada Power and 0.56 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 0.64 for 2022, 0.66 for 2023, and 0.69 for 2024 for Nevada Power and 0.62 for 2022, 0.64 for 2023, and 0.67 for 2024 for Sierra. Energy education is considered a behavioral program. Behavioral programs can be challenging to correlate, evaluate, and calculate associated energy savings to show their cost effectiveness value. NV Energy uses the Program for several purposes: engaging, outreach to, and educating customers to change how they access and use energy.

Nevada Power Input and Output Sheets

Nevada Power - Energy Education

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure (incentive) Cost | Net-to-Gross |
|--------------|---------------------------|---------------------|----------------------|------------|---------------------------------|-----------------------------|----------------------------|-----------------------|-----------------------|--------------------------------|---------------|
| Measures | \$231,532 | \$68,085 | \$163,447 | \$0 | | | | | | | |
| Events | | | | | 27,249 | N/A | N/A | N/A | N/A | N/A | N/A |
| Kits | | | | | 688 | 460 | 316,205 | 10.5 | \$43 | \$29,481 | 100.0% |
| Total | | | | | 27,937 | 11 | 316,205 | 10.5 | \$43 | \$29,481 | 100.0% |

| | | | |
|-------------------------|-----------------------|------------------------------|-----------------------------------|
| Name: | 2020 Energy Education | Last Updated: | 5/25/2021 19:50 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$136,836 | \$231,532 | (\$94,696) | 0.59 | \$0.090 |
| Total Resource Cost (TRC) | \$109,918 | \$231,532 | (\$121,614) | 0.47 | \$0.090 |
| Utility Cost Test (UCT) | \$109,918 | \$231,532 | (\$121,614) | 0.47 | \$0.090 |
| Participant Cost Test (PCT) | \$243,712 | \$0 | \$243,712 | | \$0.000 |
| Ratepayer Impact (RIM) | \$109,918 | \$475,244 | (\$365,326) | 0.23 | \$0.186 |
| Societal Cost (SCT) | \$144,058 | \$231,532 | (\$87,474) | 0.62 | \$0.090 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$231,532 | \$0 | \$0 | \$231,532 |
| Electric Benefits (\$) | \$11,555 | \$0 | \$0 | \$109,918 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 332,057 | 0 | 0 | 3,473,321 |
| Critical Peak Hour Demand (kW) | 38 | 0 | 0 | 38 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 27,147 | 0 | 0 | 283,557 |
| Total On Peak Hours (%) | | | | 8.16% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52.165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 24.49% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Education Program Data Sheet

| | | | |
|-------------------------|------------------|------------------------------|-----------------|
| Name: | Energy Education | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 10.46 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:53 |
| Start Year: | 2020 | | |
| End Year: | 2020 | <i>ACE guru™ Model</i> | |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$136,833 | \$231,532 | (\$94,699) | 0.59 | \$0.067 |
| Total Resource Cost (TRC) | \$109,915 | \$231,532 | (\$121,617) | 0.47 | \$0.067 |
| Utility Cost Test (UCT) | \$109,915 | \$231,532 | (\$121,617) | 0.47 | \$0.067 |
| Participant Cost Test (PCT) | \$243,712 | \$0 | \$243,712 | | \$0.000 |
| Rate Payer Impact (RIM) | \$109,915 | \$475,244 | (\$365,329) | 0.23 | \$0.137 |
| Societal Cost (SCT) | \$145,824 | \$231,532 | (\$85,708) | 0.63 | \$0.067 |

*Includes Rebates Paid to Freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$231,532 | \$0 | \$0 | \$231,532 |
| Electric Benefit (\$) | \$11,554 | \$0 | \$0 | \$109,915 |
| Gas Benefit (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 332,057 | 0 | 0 | 3,473,321 |
| Critical Peak Hour Demand (kW) | 38 | 0 | 0 | 38 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 27,109 | 0 | 0 | 283,556 |
| Total on Peak Hours (%) | | | | 8.16% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | <u>Scenarios</u> | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 24.49% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-to-Gross Ratio | 100.0% | | |

Nevada Power - Energy Education

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to-Gross |
|----------|------------------------------|---------------------|----------------------|------------|---------|---------------------------------|-----------------------------|----------------------------|-----------------------|-----------------------|--------------------|--------------|
| Measures | \$450,000 | \$77,456 | \$255,446 | \$117,098 | \$0 | | | | | | | |
| Events | | | | | N/A | 37,209 | N/A | N/A | N/A | N/A | N/A | N/A |
| Kits | | | | | 0 | 2,791 | 215 | 600,000 | 10.5 | \$42 | \$117,098 | 100.0% |
| Total | | | | | 0 | 40,000 | 15 | 600,000 | 10.5 | \$42 | \$117,098 | 100.0% |

Nevada Power - Energy Education

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure (incentive) Cost | Net-to-Gross |
|----------|------------------------------|---------------------|----------------------|------------|---------|---------------------------------|-----------------------------|----------------------------|-----------------------|-----------------------|--------------------------------|--------------|
| Measures | \$450,000 | \$77,456 | \$251,484 | \$121,060 | \$0 | | | | | | | |
| Events | | | | | N/A | 37,209 | N/A | N/A | N/A | N/A | N/A | N/A |
| Kits | | | | | 0 | 2,791 | 215 | 600,000 | 10.5 | \$43 | \$121,060 | 100.0% |
| Total | | | | | 0 | 40,000 | 15 | 600,000 | 10.5 | \$43 | \$121,060 | 100.0% |

Nevada Power - Energy Education

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure (incentive) Cost | Net-to-Gross |
|----------|------------------------------|---------------------|----------------------|------------|---------|---------------------------------|-----------------------------|----------------------------|-----------------------|-----------------------|--------------------------------|--------------|
| Measures | \$450,000 | \$77,456 | \$247,353 | \$125,191 | \$0 | | | | | | | |
| Events | | | | | N/A | 37,209 | N/A | N/A | N/A | N/A | N/A | N/A |
| Kits | | | | | 0 | 2,791 | 215 | 600,000 | 10.5 | \$45 | \$125,191 | 100.0% |
| Total | | | | | 0 | 40,000 | 15 | 600,000 | 10.5 | \$45 | \$125,191 | 100.0% |

Nevada Power Companies d/b/a as NV Energy

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Energy Education Program Data Sheet

| | | | |
|-------------------------|-----------------------|------------------------------|-----------------------------------|
| Name: | 2022 Energy Education | Last Updated: | 5/25/2021 20:02 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$286,390 | \$450,000 | (\$163,610) | 0.64 | \$0.093 |
| Total Resource Cost (TRC) | \$230,051 | \$450,000 | (\$219,949) | 0.51 | \$0.093 |
| Utility Cost Test (UCT) | \$230,051 | \$450,000 | (\$219,949) | 0.51 | \$0.093 |
| Participant Cost Test (PCT) | \$579,543 | \$0 | \$579,543 | | \$0.000 |
| Ratepayer Impact (RIM) | \$230,051 | \$912,445 | (\$682,394) | 0.25 | \$0.188 |
| Societal Cost (SCT) | \$301,874 | \$450,000 | (\$148,126) | 0.67 | \$0.093 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$450,000 | \$0 | \$0 | \$450,000 |
| Electric Benefits (\$) | \$25,282 | \$0 | \$0 | \$230,051 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 630,080 | 0 | 0 | 6,590,637 |
| Critical Peak Hour Demand (kW) | 72 | 0 | 0 | 72 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 51,511 | 0 | 0 | 538,050 |
| Total On Peak Hours (%) | | | | 8.16% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 24.49% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|-----------------------|------------------------------|-----------------------------------|
| Name: | 2023 Energy Education | Last Updated: | 5/25/2021 20:10 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$297,473 | \$450,000 | (\$152,527) | 0.66 | \$0.093 |
| Total Resource Cost (TRC) | \$238,954 | \$450,000 | (\$211,046) | 0.53 | \$0.093 |
| Utility Cost Test (UCT) | \$238,954 | \$450,000 | (\$211,046) | 0.53 | \$0.093 |
| Participant Cost Test (PCT) | \$583,505 | \$0 | \$583,505 | | \$0.000 |
| Ratepayer Impact (RIM) | \$238,954 | \$912,445 | (\$673,491) | 0.26 | \$0.188 |
| Societal Cost (SCT) | \$313,612 | \$450,000 | (\$136,388) | 0.70 | \$0.093 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$450,000 | \$0 | \$0 | \$450,000 |
| Electric Benefits (\$) | \$25,057 | \$0 | \$0 | \$238,954 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 630,080 | 0 | 0 | 6,590,637 |
| Critical Peak Hour Demand (kW) | 72 | 0 | 0 | 72 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 51,511 | 0 | 0 | 538,050 |
| Total On Peak Hours (%) | | | | 8.16% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 24.49% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

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| | | | |
|-------------------------|-----------------------|------------------------------|-----------------------------------|
| Name: | 2024 Energy Education | Last Updated: | 5/25/2021 20:17 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$310,172 | \$450,000 | (\$139,828) | 0.69 | \$0.093 |
| Total Resource Cost (TRC) | \$249,154 | \$450,000 | (\$200,846) | 0.55 | \$0.093 |
| Utility Cost Test (UCT) | \$249,154 | \$450,000 | (\$200,846) | 0.55 | \$0.093 |
| Participant Cost Test (PCT) | \$587,636 | \$0 | \$587,636 | | \$0.000 |
| Ratepayer Impact (RIM) | \$249,154 | \$912,445 | (\$663,290) | 0.27 | \$0.188 |
| Societal Cost (SCT) | \$327,075 | \$450,000 | (\$122,925) | 0.73 | \$0.093 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$450,000 | \$0 | \$0 | \$450,000 |
| Electric Benefits (\$) | \$23,348 | \$0 | \$0 | \$249,154 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 630,080 | 0 | 0 | 6,590,637 |
| Critical Peak Hour Demand (kW) | 72 | 0 | 0 | 72 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 51,511 | 0 | 0 | 538,050 |
| Total On Peak Hours (%) | | | | 8.16% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 24.49% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

Sierra Input and Output Sheets

Sierra - Energy Education

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure (incentive) Cost | Net-to-Gross |
|----------|---------------------------|---------------------|----------------------|------------|---------------------------------|-----------------------------|----------------------------|-----------------------|-----------------------|--------------------------------|--------------|
| Measures | \$145,861 | \$51,974 | \$93,801 | \$86 | | | | | | | |
| Events | | | | | 6,481 | N/A | N/A | N/A | N/A | N/A | N/A |
| Kits | | | | | 396 | 475 | 188,021 | 10.6 | \$45 | \$17,820 | 100.0% |
| Total | | | | | 6,877 | 27 | 188,021 | 10.6 | \$45 | \$17,820 | 100.0% |

| | | | |
|-------------------------|-----------------------|------------------------------|----------------------------------|
| Name: | 2020 Energy Education | Last Updated: | 5/25/2021 18:56 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$82,021 | \$145,861 | (\$63,840) | 0.56 | \$0.092 |
| Total Resource Cost (TRC) | \$68,593 | \$145,861 | (\$77,268) | 0.47 | \$0.092 |
| Utility Cost Test (UCT) | \$68,593 | \$145,861 | (\$77,268) | 0.47 | \$0.092 |
| Participant Cost Test (PCT) | \$118,953 | \$0 | \$118,953 | | \$0.000 |
| Ratepayer Impact (RIM) | \$68,593 | \$264,728 | (\$196,135) | 0.26 | \$0.167 |
| Societal Cost (SCT) | \$86,566 | \$145,861 | (\$59,294) | 0.59 | \$0.092 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$145,861 | \$0 | \$0 | \$145,861 |
| Electric Benefits (\$) | \$7,030 | \$0 | \$0 | \$68,593 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 200,663 | 0 | 0 | 2,129,032 |
| Critical Peak Hour Demand (kW) | 24 | 0 | 0 | 24 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 7,273 | 0 | 0 | 406,331 |
| Total On Peak Hours (%) | | | | 19.09% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 19.58% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Education Program Data Sheet

| | | | | | |
|--|------------------|--------------------------|--------------------|---------------|-------------------|
| Name: | Energy Education | Last Updated: | 5/24/2021 | | |
| Customer Sector: | Residential | Avg Measure Life: | 10.61 | | |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:05 | | |
| Start Year: | 2020 | | | | |
| End Year: | 2020 | ACE guru™ Model | | | |
| Notes: | | | | | |
| | | | | | Cost of Conserved |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$82,021 | \$145,861 | (\$63,840) | 0.56 | \$0.069 |
| Total Resource Cost (TRC) | \$68,593 | \$145,861 | (\$77,268) | 0.47 | \$0.069 |
| Utility Cost Test (UCT) | \$68,593 | \$145,861 | (\$77,268) | 0.47 | \$0.069 |
| Participant Cost Test (PCT) | \$118,953 | \$0 | \$118,953 | | \$0.000 |
| Rate Payer Impact (RIM) | \$68,593 | \$264,728 | (\$196,135) | 0.26 | \$0.124 |
| Societal Cost (SCT) | \$86,566 | \$145,861 | (\$59,294) | 0.59 | \$0.069 |
| *Includes Rebates Paid to Free riders | | | | | |
| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project | |
| Total Utility Investment (\$) | \$145,861 | \$0 | \$0 | \$145,861 | |
| Electric Benefit (\$) | \$7,030 | \$0 | \$0 | \$68,593 | |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 200,663 | 0 | 0 | 2,129,032 | |
| Critical Peak Hour Demand (kW) | 24 | 0 | 0 | 24 | |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 | |
| Total on Peak Hours (kWh) | 7,249 | 0 | 0 | 76,908 | |
| Total on Peak Hours (%) | | | | 3.61% | |
| *Savings in this Section are Adjusted for Line Loss and Net-to-Gross | | | | | |
| Financial Data | | | Secondary Benefits | | |
| Discount Rate | 6.75% | Other Savings | | \$0 | |
| Rate Escalator | 0.00% | | | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | | | |
| Line Loss (Energy) | 6.30% | Measure Life | | 100% | |
| Line Loss (Demand) | 14.31% | Energy Savings | | 100% | |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Avoided Energy Cost | | 100% | |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 19.58% | Incremental Measure Cost | | 100% | |
| Electric Retail Rate (\$/kWh) | \$0.08 | | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-to-Gross Ratio | 100.00% | | | | |

Sierra - Energy Education

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure (incentive) Cost | Net-to-Gross |
|----------|------------------------------|---------------------|----------------------|------------|---------|---------------------------------|-----------------------------|----------------------------|-----------------------|-----------------------|--------------------------------|--------------|
| Measures | \$310,000 | \$71,490 | \$160,444 | \$78,065 | \$0 | | | | | | | |
| Events | | | | | N/A | 18,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Kits | | | | | 0 | 1,860 | 215 | 400,000 | 10.6 | \$42 | \$78,065 | 100.0% |
| Total | | | | | 0 | 19,860 | 20 | 400,000 | 10.6 | \$42 | \$78,065 | 100.0% |

Sierra - Energy Education

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure (incentive) Cost | Net-to-Gross |
|----------|------------------------------|---------------------|----------------------|------------|---------|---------------------------------|-----------------------------|----------------------------|-----------------------|-----------------------|--------------------------------|--------------|
| Measures | \$310,000 | \$71,490 | \$157,802 | \$80,707 | \$0 | | | | | | | |
| Events | | | | | N/A | 18,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Kits | | | | | 0 | 1,860 | 215 | 400,000 | 10.6 | \$43 | \$80,707 | 100.0% |
| Total | | | | | 0 | 19,860 | 20 | 400,000 | 10.6 | \$43 | \$80,707 | 100.0% |

Sierra - Energy Education

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure (incentive) Cost | Net-to-Gross |
|----------|------------------------------|---------------------|----------------------|------------|---------|---------------------------------|-----------------------------|----------------------------|-----------------------|-----------------------|--------------------------------|--------------|
| Measures | \$310,000 | \$71,490 | \$155,049 | \$83,460 | \$0 | | | | | | | |
| Events | | | | | N/A | 18,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Kits | | | | | 0 | 1,860 | 215 | 400,000 | 10.6 | \$45 | \$83,460 | 100.0% |
| Total | | | | | 0 | 19,860 | 20 | 400,000 | 10.6 | \$45 | \$83,460 | 100.0% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Education Program Data Sheet

| | | | |
|-------------------------|-----------------------|------------------------------|----------------------------------|
| Name: | 2022 Energy Education | Last Updated: | 5/25/2021 19:06 |
| Customer Sector: | Residential | Avg Measure Life: | Multiple |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$192,188 | \$310,000 | (\$117,811) | 0.62 | \$0.092 |
| Total Resource Cost (TRC) | \$160,724 | \$310,000 | (\$149,275) | 0.52 | \$0.092 |
| Utility Cost Test (UCT) | \$160,724 | \$310,000 | (\$149,275) | 0.52 | \$0.092 |
| Participant Cost Test (PCT) | \$330,946 | \$0 | \$330,946 | | \$0.000 |
| Ratepayer Impact (RIM) | \$160,724 | \$562,881 | (\$402,156) | 0.29 | \$0.167 |
| Societal Cost (SCT) | \$203,076 | \$310,000 | (\$106,924) | 0.66 | \$0.092 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$310,000 | \$0 | \$0 | \$310,000 |
| Electric Benefits (\$) | \$17,155 | \$0 | \$0 | \$160,724 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 426,894 | 0 | 0 | 4,529,349 |
| Critical Peak Hour Demand (kW) | 51 | 0 | 0 | 51 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 15,472 | 0 | 0 | 864,437 |
| Total On Peak Hours (%) | | | | 19.09% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 19.58% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|-----------------------|------------------------------|----------------------------------|
| Name: | 2023 Energy Education | Last Updated: | 5/25/2021 19:14 |
| Customer Sector: | Residential | Avg Measure Life: | Multiple |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$199,644 | \$310,000 | (\$110,356) | 0.64 | \$0.092 |
| Total Resource Cost (TRC) | \$166,960 | \$310,000 | (\$143,040) | 0.54 | \$0.092 |
| Utility Cost Test (UCT) | \$166,960 | \$310,000 | (\$143,040) | 0.54 | \$0.092 |
| Participant Cost Test (PCT) | \$333,588 | \$0 | \$333,588 | | \$0.000 |
| Ratepayer Impact (RIM) | \$166,960 | \$562,881 | (\$395,921) | 0.30 | \$0.167 |
| Societal Cost (SCT) | \$210,990 | \$310,000 | (\$99,010) | 0.68 | \$0.092 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$310,000 | \$0 | \$0 | \$310,000 |
| Electric Benefits (\$) | \$17,006 | \$0 | \$0 | \$166,960 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 426,894 | 0 | 0 | 4,529,349 |
| Critical Peak Hour Demand (kW) | 51 | 0 | 0 | 51 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 15,472 | 0 | 0 | 864,437 |
| Total On Peak Hours (%) | | | | 19.09% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 19.58% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Education Program Data Sheet

| | | | |
|-------------------------|-----------------------|------------------------------|----------------------------------|
| Name: | 2024 Energy Education | Last Updated: | 5/25/2021 19:22 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$208,039 | \$310,000 | (\$101,961) | 0.67 | \$0.092 |
| Total Resource Cost (TRC) | \$173,980 | \$310,000 | (\$136,019) | 0.56 | \$0.092 |
| Utility Cost Test (UCT) | \$173,980 | \$310,000 | (\$136,019) | 0.56 | \$0.092 |
| Participant Cost Test (PCT) | \$336,341 | \$0 | \$336,341 | | \$0.000 |
| Ratepayer Impact (RIM) | \$173,980 | \$562,881 | (\$388,900) | 0.31 | \$0.167 |
| Societal Cost (SCT) | \$219,907 | \$310,000 | (\$90,093) | 0.71 | \$0.092 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$310,000 | \$0 | \$0 | \$310,000 |
| Electric Benefits (\$) | \$15,829 | \$0 | \$0 | \$173,980 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 426,894 | 0 | 0 | 4,529,349 |
| Critical Peak Hour Demand (kW) | 51 | 0 | 0 | 51 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 15,472 | 0 | 0 | 864,437 |
| Total On Peak Hours (%) | | | | 19.09% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 19.58% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Reports Program Data Sheet**

2020-2024 Energy Reports Program

Description

The Energy Reports Program (“Program”) provides periodic paper and electronic communications to a select group of residential customers, including single family, multi-family and low-income, to help reduce monthly energy use and save on their utility bills. Customers need to have a 12-month billing history, and an average billing cycle between 10 and 90 days.

These targeted communications are delivered via a customized Home Energy Report (“Report”) that includes the customer’s energy usage, billing information, customized tips, and information to help them improve the overall energy efficiency in their home.

The Report provides customers with detailed information about their energy use and energy savings tips. This educates customers on low-cost measures, practices or behaviors to reduce their energy consumption and lead to more efficient energy use.

The Reports also inform customers of other DSM programs in which they can participate to further increase their efficiency. As customers become more familiar with the findings of their Report and additional opportunities NV Energy offers them to save, they are more knowledgeable consumers of energy and better able to modify their behavior and implement measures to maximize their savings.

Residential customers are enrolled based on their previous 12 months of energy usage and are targeted based on their high-energy use. The Program is not predicated on opt-in or allowing customers to request a Report. Residential low-income customers are also included in targeted outreach and are identified by federal poverty zip code locations.

2020 Results

The expenditures, demand and energy savings, and participant results for the Program for the 2020 program year are provided in Table DSM-29 below.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Reports Program Data Sheet**

Table DSM-29: 2020 Energy Reports Expenditures, Savings, and Participants Results

| 2020 Program Component | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|------------------------------|--------------------|------------------|----------------------------------|-------------------|-------------------|----------------------------------|--------------|--------------|----------------------------------|----------------|----------------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Energy Reports | \$800,000 | \$563,940 | (29.5%) | 23,823,100 | 16,367,498 | (31.3%) | 5,131 | 6,430 | 25.3% | 171,000 | 172,471 | 0.9% |
| Sierra | | | | | | | | | | | | |
| Energy Reports | \$500,000 | \$229,645 | (54.1%) | 7,893,100 | 6,500,285 | (17.6%) | 2,358 | 2,192 | (7.0%) | 86,000 | 89,045 | 3.5% |
| NV Energy Total | | | | | | | | | | | | |
| NV Energy Total | \$1,300,000 | \$793,585 | (39.0%) | 31,716,199 | 22,867,783 | (27.9%) | 7,489 | 8,622 | 15.1% | 257,000 | 261,516 | 1.8% |

2020 Overall Results and Activities

Residential customers who have a registered email address with NV Energy received a periodic electronic Report and a monthly Similar Homes Comparison email which was designed to optimize energy (kWh) and demand (kW) savings while promoting NV Energy's online engagement. NV Energy mailed six paper Reports to NV Energy customers without a registered email address.

The NV Energy Program delivered the Report to a specific treatment group of residential customers to accomplish the following:

- Deliver large-scale, measurable, cost-effective reduction in energy (kWh) consumption,
- Generate measurable demand (kW) savings,
- Strengthen NV Energy's relationship and communications with its customers,
- Increase customer outreach,
- Expand awareness and adoption of NV Energy's other DSM program offerings.

During 2020, the Program implemented the following improvements:

- For 2020, NV Energy maintained the same treatment and control groups for the Program. Participants with available registered emails received their reports via email instead of mailed paper Reports to save money and deliver more Reports to customers.
- The Program included a 2020 welcome email in January 2020, announcing the transition to electronic report delivery for those customers for which e-mail addresses were available. Customers who had not provided an e-mail address continued to receive a mailed Report. This was a cost savings opportunity for the Program.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Reports Program Data Sheet**

2020 Lessons Learned and Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years:

- This Program was not affected by COVID-19 restrictions.
- Opportunities should be explored to expand it in 2021 and to educate customers about the DSM portfolio. This should apply to both paper and electronic reports.

2021 Plan

The authorized budgets, projected demand and energy savings targets, and participant goals for the Program for the 2021 program year are provided in Table DSM-30 below.

Table DSM-30: 2021 Energy Reports Authorized Budgets, Savings Targets, and Participant Goals

| 2021 Program Components | Authorized Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------|--------------------------|--|---|-------------------------|
| Nevada Power | | | | |
| Energy Reports - Home | \$800,000 | 4,373 | 11,000,000 | 191,505 |
| Sierra | | | | |
| Energy Reports - Home | \$500,000 | 1,488 | 5,000,000 | 86,000 |
| NV Energy | \$1,300,000 | 5,861 | 16,000,000 | 277,505 |

In program year 2021, the Program will continue to treat the existing treatment group established during the 2020 program year's implementation. For those customers with an email address, an electronic report will be sent and for those customers that NV Energy does not have an email address, a paper report will be mailed. The treatment group will receive six paper Reports throughout 2021.

2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year.

- NV Energy will explore marketing techniques that could lead to more customers opening e-mailed Reports. This could be changing subject lines to be more interesting and informative.
- A subset of electronic Report participants will be converted back to paper Reports to support energy savings for the Program. The subset conversion parameter was based on

**Nevada Power Companies d/b/a as NV Energy
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Energy Reports Program Data Sheet**

customers that did not open any electronic Reports. To engage those customers, the mailed Reports outreach method was chosen.

- An additional group of email customers will be added to account for attrition of Program participants.

2022-2024 Proposed Plans

The proposed budget, projected demand and energy savings, and participant goals for the Program for the 2022 through 2024 program years are provided in Table DSM-31 below.

Table DSM-31: 2022-2024 Energy Reports Proposed Budgets, Savings Targets, and Participant Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|---------------------------|------------------------|--|---|-------------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Energy Reports - Home | \$725,000 | 4,445 | 11,600,000 | 122,234 |
| Sierra | | | | |
| Energy Reports - Home | \$390,000 | 2,539 | 7,100,000 | 97,260 |
| NV Energy | \$1,115,000 | 6,984 | 18,700,000 | 219,494 |
| 2023 | | | | |
| Nevada Power | | | | |
| Energy Reports - Home | \$725,000 | 4,445 | 11,600,000 | 122,234 |
| Sierra | | | | |
| Energy Reports - Home | \$390,000 | 2,539 | 7,100,000 | 97,260 |
| NV Energy | \$1,115,000 | 6,984 | 18,700,000 | 219,494 |
| 2024 | | | | |
| Nevada Power | | | | |
| Energy Reports - Home | \$725,000 | 4,445 | 11,600,000 | 122,234 |
| Sierra | | | | |
| Energy Reports - Home | \$390,000 | 2,539 | 7,100,000 | 97,260 |
| NV Energy | \$1,115,000 | 6,984 | 18,700,000 | 219,494 |

The Program provides periodic paper and electronic communications to a select group of residential customers which directly supports education outreach by informing them about ways to reduce their energy use and save on monthly utility bills. The reports provide detailed energy consumption and information specific to the customer. Personalized tips and recommendations provided further equip them with suggested steps and measures they can take and implement into their daily routine to increase their energy efficiency.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Reports Program Data Sheet**

The Reports are designed to accomplish the following objectives:

- Deliver large-scale, measurable, cost-effective reduction in energy (kWh) consumption;
- Generate measurable demand (kW) savings;
- Strengthen NV Energy's relationships with its customers;
- Increase customer outreach and education initiatives;
- Expand awareness and adoption of NV Energy's various program offerings within the DSM program portfolio.

2022-2024 Proposed Plan Enhancement

The following are the proposed Program plan enhancements that will be considered during the 2022 through 2024 program years:

- The Program will launch a new wave of outreach too low to moderate income ("LMI") customers. This cohort study population would be comprised only of income eligible customers, and the treatment approach may differ from the core program. For example, similar home comparison ("SHC") may be transitioned to an annual self-comparison and all tips and recommendations would be focused on low to no cost measures. Billing and budget related alerts would be prioritized.
- Integrate new digital alerts and upgrade the web experience to include new features focused on cross promotion of other NV Energy programs and offers (both DSM focused as well as rate schedules, EV promotion, etc.), rate education and more. Scale energy-efficient product sales through PowerShift Smart Shop and create seamless points of connection to brick and mortar retail with NV Energy's implementation partners.
- The Program will explore adding additional sections that could enhance the information provided in the Report. A subsection that would compare the participant's current energy consumption to their own consumption over time could reinforce customers' success in saving energy and/or help them to evaluate why their energy consumption changes through time.

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-06 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-06 and DSM-17, which are calculated by the third-party evaluator ADM.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Reports Program Data Sheet**

Incremental Costs

There were no incremental costs or out-of-pocket expenses to the customers in this Program.

Incentives/Rebates

There were no incentives or rebates paid by this Program.

Measure Life

As determined in the M&V Report, the EUL for this program was 1.0 year for Nevada Power and 1.0 year for Sierra.

Measure Units

The unit of measure is counted as each individual customer who receives a Report.

Savings

For the Program, the verified energy savings were 94.9 kWh per unit for Nevada Power and 73.0 kWh for Sierra.

Financial Analysis

Financial assumptions are provided in Section 4 of this annual update filing and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program has an overall cost effectiveness NTRC score for 2020 of 2.29 for Nevada Power and 2.09 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 1.53 for 2022, 1.47 for 2023, and 1.35 for 2024 for Nevada Power and 1.53 for 2022, 1.54 for 2023, and 1.42 for 2024 for Sierra.

Nevada Power Input and Output Sheets

Nevada Power - Energy Reports

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|----------------|---------------------------|---------------------|----------------------|---------------------------------|-----------------------------|----------------------------|-----------------------|--------------|
| Measures | \$563,940 | \$83,339 | \$480,601 | | | | | |
| Mailed Reports | | | | 172,471 | 95 | 16,367,498 | 1.0 | 100.0% |
| Total | | | | 172,471 | 95 | 16,367,498 | 1.0 | 100.0% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Reports Program Data Sheet

| | | | |
|-------------------------|--------------------------|------------------------------|-----------------------------------|
| Name: | 2020 Home Energy Reports | Last Updated: | 5/25/2021 19:51 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | Home Energy Reports |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,291,049 | \$563,940 | \$727,109 | 2.29 | \$0.033 |
| Total Resource Cost (TRC) | \$1,122,651 | \$563,940 | \$558,711 | 1.99 | \$0.033 |
| Utility Cost Test (UCT) | \$1,122,651 | \$563,940 | \$558,711 | 1.99 | \$0.033 |
| Participant Cost Test (PCT) | \$1,636,750 | \$0 | \$1,636,750 | | \$0.000 |
| Ratepayer Impact (RIM) | \$1,122,651 | \$2,200,690 | (\$1,078,039) | 0.51 | \$0.128 |
| Societal Cost (SCT) | \$1,330,033 | \$563,940 | \$766,093 | 2.36 | \$0.033 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$563,940 | \$0 | \$0 | \$563,940 |
| Electric Benefits (\$) | \$1,122,651 | \$0 | \$0 | \$1,122,651 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 17,188,056 | 0 | 0 | 17,188,056 |
| Critical Peak Hour Demand (kW) | 6,271 | 0 | 0 | 6,271 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 3,556,043 | 0 | 0 | 3,549,772 |
| Total On Peak Hours (%) | | | | 20.65% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|---------------------|------------------------------|-----------------|
| Name: | Home Energy Reports | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:53 |
| Start Year: | 2020 | | |
| End Year: | 2020 | ACE guru™ Model | |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,291,046 | \$563,940 | \$727,106 | 2.29 | \$0.033 |
| Total Resource Cost (TRC) | \$1,122,649 | \$563,940 | \$558,709 | 1.99 | \$0.033 |
| Utility Cost Test (UCT) | \$1,122,649 | \$563,940 | \$558,709 | 1.99 | \$0.033 |
| Participant Cost Test (PCT) | \$1,636,750 | \$0 | \$1,636,750 | | \$0.000 |
| Rate Payer Impact (RIM) | \$1,122,649 | \$2,200,690 | (\$1,078,041) | 0.51 | \$0.128 |
| Societal Cost (SCT) | \$1,335,878 | \$563,940 | \$771,938 | 2.37 | \$0.033 |

*Includes Rebates Paid to Freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$563,940 | \$0 | \$0 | \$563,940 |
| Electric Benefit (\$) | \$1,122,649 | \$0 | \$0 | \$1,122,649 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 17,188,056 | 0 | 0 | 17,188,056 |
| Critical Peak Hour Demand (kW) | 6,271 | 0 | 0 | 6,271 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 3,549,772 | 0 | 0 | 3,549,772 |
| Total on Peak Hours (%) | | | | 20.65% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | <u>Scenarios</u> | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-to-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Reports Program Data Sheet

Nevada Power - Energy Reports

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms) | Effective Useful Life | Net-to-Gross |
|----------------|------------------------------|---------------------|----------------------|---------------------------------|-----------------------------|----------------------------|-------------------------------|-----------------------|--------------|
| Measures | \$725,000 | \$101,273 | \$623,727 | | | | | | |
| Energy Reports | | | | 122,234 | 95 | 11,600,000 | 0 | 1.0 | 100.0% |
| Total | | | | 122,234 | 95 | 11,600,000 | 0 | 1.0 | 100.0% |

Nevada Power - Energy Reports

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms) | Effective Useful Life | Net-to-Gross |
|----------------|------------------------------|---------------------|----------------------|---------------------------------|-----------------------------|----------------------------|-------------------------------|-----------------------|--------------|
| Measures | \$725,000 | \$101,273 | \$623,727 | | | | | | |
| Energy Reports | | | | 122,234 | 95 | 11,600,000 | 0 | 1.0 | 100.0% |
| Total | | | | 122,234 | 95 | 11,600,000 | 0 | 1.0 | 100.0% |

Nevada Power - Energy Reports

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms) | Effective Useful Life | Net-to-Gross |
|----------------|------------------------------|---------------------|----------------------|---------------------------------|-----------------------------|----------------------------|-------------------------------|-----------------------|--------------|
| Measures | \$725,000 | \$101,273 | \$623,727 | | | | | | |
| Energy Reports | | | | 122,234 | 95 | 11,600,000 | 0 | 1.0 | 100.0% |
| Total | | | | 122,234 | 95 | 11,600,000 | 0 | 1.0 | 100.0% |

| | | | |
|-------------------------|--------------------------|------------------------------|-----------------------------------|
| Name: | 2022 Home Energy Reports | Last Updated: | 5/25/2021 20:02 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | Home Energy Reports |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,052,935 | \$725,000 | \$327,935 | 1.45 | \$0.060 |
| Total Resource Cost (TRC) | \$915,596 | \$725,000 | \$190,596 | 1.26 | \$0.060 |
| Utility Cost Test (UCT) | \$915,596 | \$725,000 | \$190,596 | 1.26 | \$0.060 |
| Participant Cost Test (PCT) | \$1,160,000 | \$0 | \$1,160,000 | | \$0.000 |
| Ratepayer Impact (RIM) | \$915,596 | \$1,885,000 | (\$969,404) | 0.49 | \$0.155 |
| Societal Cost (SCT) | \$1,089,983 | \$725,000 | \$364,983 | 1.50 | \$0.060 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$725,000 | \$0 | \$0 | \$725,000 |
| Electric Benefits (\$) | \$915,596 | \$0 | \$0 | \$915,596 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 12,181,547 | 0 | 0 | 12,181,547 |
| Critical Peak Hour Demand (kW) | 4,445 | 0 | 0 | 4,445 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 2,520,245 | 0 | 0 | 2,515,800 |
| Total On Peak Hours (%) | | | | 20.65% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Reports Program Data Sheet

| | | | |
|-------------------------|--------------------------|------------------------------|-----------------------------------|
| Name: | 2023 Home Energy Reports | Last Updated: | 5/25/2021 20:10 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | Home Energy Reports |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|----------------------|-------------------|---------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,062,678 | \$725,000 | \$337,678 | 1.47 | \$0.060 |
| Total Resource Cost (TRC) | \$924,068 | \$725,000 | \$199,068 | 1.27 | \$0.060 |
| Utility Cost Test (UCT) | \$924,068 | \$725,000 | \$199,068 | 1.27 | \$0.060 |
| Participant Cost Test (PCT) | \$1,160,000 | \$0 | \$1,160,000 | | \$0.000 |
| Ratepayer Impact (RIM) | \$924,068 | \$1,885,000 | (\$960,932) | 0.49 | \$0.155 |
| Societal Cost (SCT) | \$1,099,892 | \$725,000 | \$374,892 | 1.52 | \$0.060 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$725,000 | \$0 | \$0 | \$725,000 | |
| Electric Benefits (\$) | \$924,068 | \$0 | \$0 | \$924,068 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 12,181,547 | 0 | 0 | 12,181,547 | |
| Critical Peak Hour Demand (kW) | 4,445 | 0 | 0 | 4,445 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 2,520,245 | 0 | 0 | 2,515,800 | |
| Total On Peak Hours (%) | | | | 20.65% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | | | <u>Secondary Benefits</u> | | |
| Discount Rate: | 7.14% | | Other Savings | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | <u>Scenarios:</u> | | |
| Line Loss (Energy): | 4.77% | | Measure Life | 100% | |
| Line Loss (Demand): | 9.93% | | Energy Savings | 100% | |
| Avoided T&D Capacity \$/MW: | \$52,165 | | Avoided Energy Cost | 100% | |
| Environmental Adder (SCT only) | 10.00% | | Avoided Capacity Cost | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | | Incremental Measure Cost | 100% | |
| Electric Retail Rate (\$/KWh): | \$0.10 | | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

| | | | |
|-------------------------|--------------------------|------------------------------|-----------------------------------|
| Name: | 2024 Home Energy Reports | Last Updated: | 5/25/2021 20:18 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | Home Energy Reports |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|----------------------|-------------------|---------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$978,871 | \$725,000 | \$253,871 | 1.35 | \$0.060 |
| Total Resource Cost (TRC) | \$851,192 | \$725,000 | \$126,192 | 1.17 | \$0.060 |
| Utility Cost Test (UCT) | \$851,192 | \$725,000 | \$126,192 | 1.17 | \$0.060 |
| Participant Cost Test (PCT) | \$1,160,000 | \$0 | \$1,160,000 | | \$0.000 |
| Ratepayer Impact (RIM) | \$851,192 | \$1,885,000 | (\$1,033,808) | 0.45 | \$0.155 |
| Societal Cost (SCT) | \$1,009,081 | \$725,000 | \$284,081 | 1.39 | \$0.060 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$725,000 | \$0 | \$0 | \$725,000 | |
| Electric Benefits (\$) | \$851,192 | \$0 | \$0 | \$851,192 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 12,181,547 | 0 | 0 | 12,181,547 | |
| Critical Peak Hour Demand (kW) | 4,445 | 0 | 0 | 4,445 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 2,520,245 | 0 | 0 | 2,515,800 | |
| Total On Peak Hours (%) | | | | 20.65% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | | | <u>Secondary Benefits</u> | | |
| Discount Rate: | 7.14% | | Other Savings | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | <u>Scenarios:</u> | | |
| Line Loss (Energy): | 4.77% | | Measure Life | 100% | |
| Line Loss (Demand): | 9.93% | | Energy Savings | 100% | |
| Avoided T&D Capacity \$/MW: | \$52,165 | | Avoided Energy Cost | 100% | |
| Environmental Adder (SCT only) | 10.00% | | Avoided Capacity Cost | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | | Incremental Measure Cost | 100% | |
| Electric Retail Rate (\$/KWh): | \$0.10 | | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Reports Program Data Sheet

Sierra Input and Output Sheets

Sierra - Energy Reports

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|----------------|---------------------------|---------------------|----------------------|---------------------------------|-----------------------------|----------------------------|-----------------------|--------------|
| Measures | \$229,645 | \$56,092 | \$173,553 | | | | | |
| Mailed Reports | | | | 89,045 | 73 | 6,500,285 | 1.0 | 100.0% |
| Total | | | | 89,045 | 73 | 6,500,285 | 1.0 | 100.0% |

| | | | |
|------------------|--------------------------|-----------------------|----------------------------------|
| Name: | 2020 Home Energy Reports | Last Updated: | 5/25/2021 18:57 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | Home Energy Reports |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsx |
| End Year: | 2020 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$481,046 | \$229,645 | \$251,401 | 2.09 | \$0.033 |
| Total Resource Cost (TRC) | \$418,301 | \$229,645 | \$188,656 | 1.82 | \$0.033 |
| Utility Cost Test (UCT) | \$418,301 | \$229,645 | \$188,656 | 1.82 | \$0.033 |
| Participant Cost Test (PCT) | \$520,023 | \$0 | \$520,023 | | \$0.000 |
| Ratepayer Impact (RIM) | \$418,301 | \$749,668 | (\$331,367) | 0.56 | \$0.108 |
| Societal Cost (SCT) | \$496,969 | \$229,645 | \$267,324 | 2.16 | \$0.033 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$229,645 | \$0 | \$0 | \$229,645 |
| Electric Benefits (\$) | \$418,301 | \$0 | \$0 | \$418,301 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 6,937,337 | 0 | 0 | 6,937,337 |
| Critical Peak Hour Demand (kW) | 2,325 | 0 | 0 | 2,325 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 469,293 | 0 | 0 | 1,513,259 |
| Total On Peak Hours (%) | | | | 21.81% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | Secondary Benefits |
|---|--------------------------|
| Discount Rate: | 6.75% |
| Rate Escalator: | 0.00% |
| Inflation Rate (T&D): | 2.00% |
| Line Loss (Energy): | 6.30% |
| Line Loss (Demand): | 14.31% |
| Avoided T&D Capacity \$/MW: | \$46,748 |
| Environmental Adder (SCT only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% |
| Electric Retail Rate (\$/kWh): | \$0.08 |
| Gas Retail Rate (\$/therm) | \$0.39 |
| Net-To-Gross Ratio | 100.0% |
| | Other Savings |
| | \$0 |
| | Scenarios: |
| | Measure Life |
| | 100% |
| | Energy Savings |
| | 100% |
| | Avoided Energy Cost |
| | 100% |
| | Avoided Capacity Cost |
| | 100% |
| | Incremental Measure Cost |
| | 100% |

| | | | |
|------------------|---------------------|-----------------------|-----------------|
| Name: | Home Energy Reports | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:05 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| Notes: | | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-------------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$481,046 | \$229,645 | \$251,401 | 2.09 | \$0.033 |
| Total Resource Cost (TRC) | \$418,301 | \$229,645 | \$188,656 | 1.82 | \$0.033 |
| Utility Cost Test (UCT) | \$418,301 | \$229,645 | \$188,656 | 1.82 | \$0.033 |
| Participant Cost Test (PCT) | \$520,023 | \$0 | \$520,023 | | \$0.000 |
| Rate Payer Impact (RIM) | \$418,301 | \$749,668 | (\$331,367) | 0.56 | \$0.108 |
| Societal Cost (SCT) | \$496,969 | \$229,645 | \$267,324 | 2.16 | \$0.033 |

*Includes Rebates Paid to Freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$229,645 | \$0 | \$0 | \$229,645 |
| Electric Benefit (\$) | \$418,301 | \$0 | \$0 | \$418,301 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 6,937,337 | 0 | 0 | 6,937,337 |
| Critical Peak Hour Demand (kW) | 2,325 | 0 | 0 | 2,325 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 466,968 | 0 | 0 | 466,968 |
| Total on Peak Hours (%) | | | | 6.73% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | Secondary Benefits |
|---|--------------------------|
| Discount Rate | 6.75% |
| Rate Escalator | 0.00% |
| Inflation Rate (T&D) | 2.00% |
| Line Loss (Energy) | 6.30% |
| Line Loss (Demand) | 14.31% |
| Avoided T&D Capacity (\$/MW) | \$46,748 |
| Environmental Adder (SCT Only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% |
| Electric Retail Rate (\$/kWh) | \$0.08 |
| Gas Retail Rate (\$/therm) | \$0.39 |
| Net-to-Gross Ratio | 100.00% |
| | Other Savings |
| | \$0 |
| | Scenarios |
| | Measure Life |
| | 100% |
| | Energy Savings |
| | 100% |
| | Avoided Energy Cost |
| | 100% |
| | Avoided Capacity Cost |
| | 100% |
| | Incremental Measure Cost |
| | 100% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Reports Program Data Sheet

Sierra - Energy Reports

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms) | Effective Useful Life | Net-to-Gross |
|----------------|------------------------------|---------------------|----------------------|---------------------------------|-----------------------------|----------------------------|-------------------------------|-----------------------|--------------|
| Measures | \$390,000 | \$79,313 | \$310,687 | | | | | | |
| Energy Reports | | | | 97,260 | 73 | 7,100,000 | 0 | 1.0 | 100.0% |
| Total | | | | 97,260 | 73 | 7,100,000 | 0 | 1.0 | 100.0% |

Sierra - Energy Reports

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms) | Effective Useful Life | Net-to-Gross |
|----------------|------------------------------|---------------------|----------------------|---------------------------------|-----------------------------|----------------------------|-------------------------------|-----------------------|--------------|
| Measures | \$390,000 | \$79,313 | \$310,687 | | | | | | |
| Energy Reports | | | | 97,260 | 73 | 7,100,000 | 0 | 1.0 | 100.0% |
| Total | | | | 97,260 | 73 | 7,100,000 | 0 | 1.0 | 100.0% |

Sierra - Energy Reports

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Units or Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms) | Effective Useful Life | Net-to-Gross |
|----------------|------------------------------|---------------------|----------------------|---------------------------------|-----------------------------|----------------------------|-------------------------------|-----------------------|--------------|
| Measures | \$390,000 | \$79,313 | \$310,687 | | | | | | |
| Energy Reports | | | | 97,260 | 73 | 7,100,000 | 0 | 1.0 | 100.0% |
| Total | | | | 97,260 | 73 | 7,100,000 | 0 | 1.0 | 100.0% |

| | | | |
|-------------------------|--------------------------|------------------------------|----------------------------------|
| Name: | 2022 Home Energy Reports | Last Updated: | 5/25/2021 19:07 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | Home Energy Reports |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$597,012 | \$390,000 | \$207,012 | 1.53 | \$0.051 |
| Total Resource Cost (TRC) | \$519,141 | \$390,000 | \$129,141 | 1.33 | \$0.051 |
| Utility Cost Test (UCT) | \$519,141 | \$390,000 | \$129,141 | 1.33 | \$0.051 |
| Participant Cost Test (PCT) | \$568,000 | \$0 | \$568,000 | | \$0.000 |
| Ratepayer Impact (RIM) | \$519,141 | \$958,000 | (\$438,859) | 0.54 | \$0.126 |
| Societal Cost (SCT) | \$619,213 | \$390,000 | \$229,213 | 1.59 | \$0.051 |

*Includes rebates paid to free riders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$390,000 | \$0 | \$0 | \$390,000 |
| Electric Benefits (\$) | \$519,141 | \$0 | \$0 | \$519,141 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 7,577,375 | 0 | 0 | 7,577,375 |
| Critical Peak Hour Demand (kW) | 2,539 | 0 | 0 | 2,539 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 512,590 | 0 | 0 | 1,652,872 |
| Total On Peak Hours (%) | | | | 21.81% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | Secondary Benefits |
|---|--------------------|
| Discount Rate: | 6.75% |
| Rate Escalator: | 0.00% |
| Inflation Rate (T&D): | 2.00% |
| Line Loss (Energy): | 6.30% |
| Line Loss (Demand): | 14.31% |
| Avoided T&D Capacity \$/MW: | \$46,748 |
| Environmental Adder (SCT only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% |
| Electric Retail Rate (\$/KWh): | \$0.08 |
| Gas Retail Rate (\$/therm) | \$0.39 |
| Net-To-Gross Ratio | 100.0% |

| | |
|--------------------------|------|
| Scenarios: | |
| Measure Life | 100% |
| Energy Savings | 100% |
| Avoided Energy Cost | 100% |
| Avoided Capacity Cost | 100% |
| Incremental Measure Cost | 100% |

Nevada Power Companies d/b/a as NV Energy

Sierra Pacific Power Companies d/b/a NV Energy

Energy Reports Program Data Sheet

| | | | |
|-------------------------|--------------------------|------------------------------|----------------------------------|
| Name: | 2023 Home Energy Reports | Last Updated: | 5/25/2021 19:14 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | Home Energy Reports |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|---------------------------|--------------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$599,850 | \$390,000 | \$209,850 | 1.54 | \$0.051 |
| Total Resource Cost (TRC) | \$521,608 | \$390,000 | \$131,608 | 1.34 | \$0.051 |
| Utility Cost Test (UCT) | \$521,608 | \$390,000 | \$131,608 | 1.34 | \$0.051 |
| Participant Cost Test (PCT) | \$568,000 | \$0 | \$568,000 | | \$0.000 |
| Ratepayer Impact (RIM) | \$521,608 | \$958,000 | (\$436,392) | 0.54 | \$0.126 |
| Societal Cost (SCT) | \$621,937 | \$390,000 | \$231,937 | 1.59 | \$0.051 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$390,000 | \$0 | \$0 | \$390,000 | |
| Electric Benefits (\$) | \$521,608 | \$0 | \$0 | \$521,608 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 7,577,375 | 0 | 0 | 7,577,375 | |
| Critical Peak Hour Demand (kW) | 2,539 | 0 | 0 | 2,539 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 512,590 | 0 | 0 | 1,652,872 | |
| Total On Peak Hours (%) | | | | 21.81% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | <u>Secondary Benefits</u> | | | | |
| Discount Rate: | 6.75% | Other Savings | | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 6.30% | <u>Scenarios:</u> | | | |
| Line Loss (Demand): | 14.31% | Measure Life | | | |
| Avoided T&D Capacity \$/MW: | \$46,748 | Energy Savings | | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Energy Cost | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Avoided Capacity Cost | | | |
| Electric Retail Rate (\$/KWh): | \$0.08 | Incremental Measure Cost | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

| | | | |
|-------------------------|--------------------------|------------------------------|----------------------------------|
| Name: | 2024 Home Energy Reports | Last Updated: | 5/25/2021 19:23 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | Home Energy Reports |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|---------------------------|--------------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$555,482 | \$390,000 | \$165,482 | 1.42 | \$0.051 |
| Total Resource Cost (TRC) | \$483,028 | \$390,000 | \$93,028 | 1.24 | \$0.051 |
| Utility Cost Test (UCT) | \$483,028 | \$390,000 | \$93,028 | 1.24 | \$0.051 |
| Participant Cost Test (PCT) | \$568,000 | \$0 | \$568,000 | | \$0.000 |
| Ratepayer Impact (RIM) | \$483,028 | \$958,000 | (\$474,972) | 0.50 | \$0.126 |
| Societal Cost (SCT) | \$573,903 | \$390,000 | \$183,903 | 1.47 | \$0.051 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$390,000 | \$0 | \$0 | \$390,000 | |
| Electric Benefits (\$) | \$483,028 | \$0 | \$0 | \$483,028 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 7,577,375 | 0 | 0 | 7,577,375 | |
| Critical Peak Hour Demand (kW) | 2,539 | 0 | 0 | 2,539 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 512,590 | 0 | 0 | 1,652,872 | |
| Total On Peak Hours (%) | | | | 21.81% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | <u>Secondary Benefits</u> | | | | |
| Discount Rate: | 6.75% | Other Savings | | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | | | |
| Line Loss (Energy): | 6.30% | Measure Life | | | |
| Line Loss (Demand): | 14.31% | Energy Savings | | | |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | | | |
| Electric Retail Rate (\$/KWh): | \$0.08 | | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Online Energy Assessments Program Data Sheet**

2022-2024 Online Energy Assessments Program

Description

The Online Energy Assessments program (“Program”) provides a self-assessment tool wherein a customer completes a home energy profile via NV Energy’s website. The Program also provides a consumption breakdown of their appliances so the customer can see where they are using the most energy.

The Online Energy Assessments (“OEA”) is a comprehensive disaggregation tool utilizing meter data. Using patented algorithms, the tool isolates appliance usage and converts the data into itemized energy bills providing useful insights. The data also considers, billing history, weather data, and customer segmentation. This provides relevant analysis uniquely customized to the customer’s household electric and gas usage.

The Program is available through NV Energy’s MyAccount online. Through the MyAccount portal, the customer can access their energy use by appliance. Based on meter and data usage from the current month, the customer is encouraged to make small changes to help them conserve energy to lower their energy bill. For more accurate data, the customer is able to complete their home profile by clicking on “Ways to Save – edit home profile.” This will prompt the customer with a survey consisting of 20 questions. Once completed, the OEA generates a customized report with actionable tips and recommendation based on their unique profile. With the self-assessment tool, the customer may update their profile at any time to receive additional energy efficiency recommendations. This keeps the customer engaged and educates them on ways they can save year-round.

This Program targets its outreach efforts to all residential customers through email, NV Energy’s website, media, direct mail with inserts or energy education events.

2020 Results and 2021 Plan

Please refer to the Energy Assessments program data sheet (Residential Programs) for the 2020 Online Energy Assessments results and 2021 Plans.

2022-2024 Proposed Plans

The proposed budgets, projected demand and energy savings, and participant goals for the Program for the 2022 through 2024 program years are provided in Table DSM-32 below.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Online Energy Assessments Program Data Sheet**

Table DSM-32: 2022-2024 Online Energy Assessments Proposed Budgets, Savings Targets, and Participant Goals

| 2022-2024 Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|------------------------------|--------------------|-----------------------------------|------------------------------------|------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Online Energy Assessments | \$1,050,000 | 0 | 0 | 32,000 |
| Sierra | | | | |
| Online Energy Assessments | \$420,000 | 0 | 0 | 6,000 |
| NV Energy | \$1,470,000 | 0 | 0 | 38,000 |
| 2023 | | | | |
| Nevada Power | | | | |
| Online Energy Assessments | \$1,050,000 | 0 | 0 | 32,000 |
| Sierra | | | | |
| Online Energy Assessments | \$420,000 | 0 | 0 | 6,000 |
| NV Energy | \$1,470,000 | 0 | 0 | 38,000 |
| 2024 | | | | |
| Nevada Power | | | | |
| Online Energy Assessments | \$1,050,000 | 0 | 0 | 32,000 |
| Sierra | | | | |
| Online Energy Assessments | \$420,000 | 0 | 0 | 6,000 |
| NV Energy | \$1,470,000 | 0 | 0 | 38,000 |

The Program will offer OEA throughout NV Energy’s service territories to all residential customers who sign up for a MyAccount profile. The online self-assessment tool provides a convenient and 24-hour access to customers who want to learn about their home’s energy usage. The Companies are committed to providing customer with tools, tips and information to help them better understand their usage and how to save on their monthly energy bills.

The results of the M&V analysis identified zero energy savings, but the Companies will continue to improve and upgrade the OEA tool in its efforts to help achieve energy savings.

2022-2024 Proposed Plan Enhancements

The following is the proposed Program enhancement that will be considered during the 2022 through 2024 program years:

- The OEA component of the Program will move to Energy Education, while still allowing customers to use the self-help tool online.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Online Energy Assessments Program Data Sheet**

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-08 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-08 and DSM-17, which are calculated by the third-party evaluator ADM.

Incremental Costs

There were no incremental costs or out-of-pocket expenses to the customer in this Program.

Incentives/Rebates

There were no incentives or rebates paid by this Program.

Measure Life

As determined in the M&V Report, the EUL is 1 year for the OEA for both Nevada Power and Sierra.

Measure Units

The Program is measured in participants.

Savings

For OEA, the verified energy savings for both Nevada Power and Sierra was 0 kWh.

Financial Analysis

Financial assumptions are provided in Section 4 of this annual update filing and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program has a projected cost effectiveness NTRC ratio of 0.0 for 2022 through 2024 for Nevada Power and Sierra. NV Energy split the Energy Assessments Program into two programs. Online Energy Assessments is more indicative of a behavioral program. Behavioral programs can be challenging to correlate, evaluate, and calculate associated energy savings to show their cost effectiveness value. NV Energy uses the Online Energy Assessment program for several purposes: engaging, outreach to, and educating customers to change how they access and use energy.

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Online Energy Assessments Program Data Sheet

Nevada Power Input and Output Sheets

Nevada Power - Online Energy Assessments

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kW h / unit) | Total Annual Savings (kW h) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|------------------------------|-----------------------------|-----------------------|---------------|
| Online | \$1,050,000 | \$109,677 | \$940,323 | 32,000 | 0 | 0 | 1.0 | 100.0% |
| Total | \$1,050,000 | \$109,677 | \$940,323 | 32,000 | 0 | 0 | 1.0 | 100.0% |

Nevada Power - Online Energy Assessments

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kW h / unit) | Total Annual Savings (kW h) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|------------------------------|-----------------------------|-----------------------|---------------|
| Online | \$1,050,000 | \$109,677 | \$940,323 | 32,000 | 0 | 0 | 1.0 | 100.0% |
| Total | \$1,050,000 | \$109,677 | \$940,323 | 32,000 | 0 | 0 | 1.0 | 100.0% |

Nevada Power - Online Energy Assessments

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kW h / unit) | Total Annual Savings (kW h) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|------------------------------|-----------------------------|-----------------------|---------------|
| Online | \$1,050,000 | \$109,677 | \$940,323 | 32,000 | 0 | 0 | 1.0 | 100.0% |
| Total | \$1,050,000 | \$109,677 | \$940,323 | 32,000 | 0 | 0 | 1.0 | 100.0% |

| | | | |
|-------------------------|--------------------------------|------------------------------|-----------------------------------|
| Name: | 2022 Online Energy Assessments | Last Updated: | 5/25/2021 20:03 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Vegas | Energy Savings Curve: | OEa |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Total Resource Cost (TRC) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Utility Cost Test (UCT) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Participant Cost Test (PCT) | \$0 | \$0 | \$0 | | #DIV/0! |
| Ratepayer Impact (RIM) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Societal Cost (SCT) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-------------|------|------|---------------|
| Total Utility Investment (\$) | \$1,050,000 | \$0 | \$0 | \$1,050,000 |
| Electric Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 0 | 0 | 0 | 0 |
| Critical Peak Hour Demand (kW) | 0 | 0 | 0 | 0 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (%) | | | | #DIV/0! |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | | |
| Line Loss (Energy): | 4.77% | Scenarios: | |
| Line Loss (Demand): | 9.93% | Measure Life | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Energy Savings | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Energy Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.08% | Avoided Capacity Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | Incremental Measure Cost | 100% |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Online Energy Assessments Program Data Sheet

| | | | |
|-------------------------|--------------------------------|------------------------------|-----------------------------------|
| Name: | 2023 Online Energy Assessments | Last Updated: | 5/25/2021 20:10 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Vegas | Energy Savings Curve: | OEA |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|----------------------|-------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Total Resource Cost (TRC) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Utility Cost Test (UCT) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Participant Cost Test (PCT) | \$0 | \$0 | \$0 | | #DIV/0! |
| Ratepayer Impact (RIM) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Societal Cost (SCT) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$1,050,000 | \$0 | \$0 | \$1,050,000 | |
| Electric Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 0 | 0 | 0 | 0 | |
| Critical Peak Hour Demand (kW) | 0 | 0 | 0 | 0 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (%) | | | | #DIV/0! | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | | | | | |
| Discount Rate: | 7.14% | | | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 4.77% | | | | |
| Line Loss (Demand): | 9.93% | | | | |
| Avoided T&D Capacity \$/MW: | \$52,165 | | | | |
| Environmental Adder (SCT only) | 10.00% | | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.08% | | | | |
| Electric Retail Rate (\$/KWh): | \$0.10 | | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |
| <u>Secondary Benefits</u> | | | | | |
| Other Savings | \$0 | | | | |
| <u>Scenarios:</u> | | | | | |
| Measure Life | 100% | | | | |
| Energy Savings | 100% | | | | |
| Avoided Energy Cost | 100% | | | | |
| Avoided Capacity Cost | 100% | | | | |
| Incremental Measure Cost | 100% | | | | |

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|-------------------------|--------------------------------|------------------------------|-----------------------------------|
| Name: | 2024 Online Energy Assessments | Last Updated: | 5/25/2021 20:18 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Vegas | Energy Savings Curve: | OEA |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|----------------------|-------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Total Resource Cost (TRC) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Utility Cost Test (UCT) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Participant Cost Test (PCT) | \$0 | \$0 | \$0 | | #DIV/0! |
| Ratepayer Impact (RIM) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| Societal Cost (SCT) | \$0 | \$1,050,000 | (\$1,050,000) | 0.00 | #DIV/0! |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$1,050,000 | \$0 | \$0 | \$1,050,000 | |
| Electric Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 0 | 0 | 0 | 0 | |
| Critical Peak Hour Demand (kW) | 0 | 0 | 0 | 0 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (%) | | | | #DIV/0! | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | | | | | |
| Discount Rate: | 7.14% | | | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 4.77% | | | | |
| Line Loss (Demand): | 9.93% | | | | |
| Avoided T&D Capacity \$/MW: | \$52,165 | | | | |
| Environmental Adder (SCT only) | 10.00% | | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.08% | | | | |
| Electric Retail Rate (\$/KWh): | \$0.10 | | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |
| <u>Secondary Benefits</u> | | | | | |
| Other Savings | \$0 | | | | |
| <u>Scenarios:</u> | | | | | |
| Measure Life | 100% | | | | |
| Energy Savings | 100% | | | | |
| Avoided Energy Cost | 100% | | | | |
| Avoided Capacity Cost | 100% | | | | |
| Incremental Measure Cost | 100% | | | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Online Energy Assessments Program Data Sheet

Sierra Input and Output Sheets

Sierra - Online Energy Assessments

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| Online | \$420,000 | \$46,672 | \$373,328 | 6,000 | 0 | 0 | 1.0 | 100.0% |
| Total | \$420,000 | \$46,672 | \$373,328 | 6,000 | 0 | 0 | 1.0 | 100.0% |

Sierra - Online Energy Assessments

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| Online | \$420,000 | \$46,672 | \$373,328 | 6,000 | 0 | 0 | 1.0 | 100.0% |
| Total | \$420,000 | \$46,672 | \$373,328 | 6,000 | 0 | 0 | 1.0 | 100.0% |

Sierra - Online Energy Assessments

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| Online | \$420,000 | \$46,672 | \$373,328 | 6,000 | 0 | 0 | 1.0 | 100.0% |
| Total | \$420,000 | \$46,672 | \$373,328 | 6,000 | 0 | 0 | 1.0 | 100.0% |

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|-------------------------|--------------------------------|------------------------------|----------------------------------|
| Name: | 2022 Online Energy Assessments | Last Updated: | 5/25/2021 19:07 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Reno | Energy Savings Curve: | OEA |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Total Resource Cost (TRC) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Utility Cost Test (UCT) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Participant Cost Test (PCT) | \$0 | \$0 | \$0 | | #DIV/0! |
| Ratepayer Impact (RIM) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Societal Cost (SCT) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$420,000 | \$0 | \$0 | \$420,000 |
| Electric Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 0 | 0 | 0 | 0 |
| Critical Peak Hour Demand (kW) | 0 | 0 | 0 | 0 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (%) | | | | #DIV/0! |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------|-----|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | | |
| Line Loss (Energy): | 6.30% | | |
| Line Loss (Demand): | 14.31% | | |
| Avoided T&D Capacity \$/MW: | \$46,748 | | |
| Environmental Adder (SCT only) | 10.00% | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.01% | | |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |
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Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Online Energy Assessments Program Data Sheet

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|------------------|--------------------------------|-----------------------|----------------------------------|
| Name: | 2023 Online Energy Assessments | Last Updated: | 5/25/2021 19:15 |
| Customer Sector: | Residential | Avg Measure Life: | OEA |
| Region : | Reno | Energy Savings Curve: | DSM_PortPro_April2021_AY.xlsm |
| Start Year: | 2023 | Model File Name: | Reno_CAD_April2021_AY.xlsx |
| End Year: | 2023 | CAD File Name: | PD_Reno_2023PY_April2021_AY.xlsx |
| Notes: | | | |

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|--|---------------|------------|--------------------|--------------------------|-----------------------------------|
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Total Resource Cost (TRC) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Utility Cost Test (UCT) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Participant Cost Test (PCT) | \$0 | \$0 | \$0 | | #DIV/0! |
| Ratepayer Impact (RIM) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Societal Cost (SCT) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| *Includes rebates paid to freeriders | | | | | |
| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project | |
| Total Utility Investment (\$) | \$420,000 | \$0 | \$0 | \$420,000 | |
| Electric Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 0 | 0 | 0 | 0 | |
| Critical Peak Hour Demand (kW) | 0 | 0 | 0 | 0 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (%) | | | | #DIV/0! | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| Financial Data | | | Secondary Benefits | | |
| Discount Rate: | 6.75% | | | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | | | |
| Line Loss (Energy): | 6.30% | | | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | | | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | | | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | | | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.01% | | | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

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|------------------|--------------------------------|-----------------------|----------------------------------|
| Name: | 2024 Online Energy Assessments | Last Updated: | 5/25/2021 19:23 |
| Customer Sector: | Residential | Avg Measure Life: | OEA |
| Region : | Reno | Energy Savings Curve: | DSM_PortPro_April2021_AY.xlsm |
| Start Year: | 2024 | Model File Name: | Reno_CAD_April2021_AY.xlsx |
| End Year: | 2024 | CAD File Name: | PD_Reno_2024PY_April2021_AY.xlsx |
| Notes: | | | |

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|--|---------------|------------|--------------------|--------------------------|-----------------------------------|
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Total Resource Cost (TRC) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Utility Cost Test (UCT) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Participant Cost Test (PCT) | \$0 | \$0 | \$0 | | #DIV/0! |
| Ratepayer Impact (RIM) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Societal Cost (SCT) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| *Includes rebates paid to freeriders | | | | | |
| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project | |
| Total Utility Investment (\$) | \$420,000 | \$0 | \$0 | \$420,000 | |
| Electric Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 0 | 0 | 0 | 0 | |
| Critical Peak Hour Demand (kW) | 0 | 0 | 0 | 0 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (%) | | | | #DIV/0! | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| Financial Data | | | Secondary Benefits | | |
| Discount Rate: | 6.75% | | | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | | | |
| Line Loss (Energy): | 6.30% | | | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | | | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | | | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | | | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.01% | | | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

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|--|--------------------------------|-----------------------|----------------------------------|---------------|-----------------------------------|
| Name: | 2024 Online Energy Assessments | Last Updated: | 5/25/2021 19:23 | | |
| Customer Sector: | Residential | Avg Measure Life: | OEA | | |
| Region : | Reno | Energy Savings Curve: | DSM_PortPro_April2021_AY.xlsm | | |
| Start Year: | 2024 | Model File Name: | Reno_CAD_April2021_AY.xlsx | | |
| End Year: | 2024 | CAD File Name: | PD_Reno_2024PY_April2021_AY.xlsx | | |
| Notes: | | | | | |
| | | | | | |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Total Resource Cost (TRC) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Utility Cost Test (UCT) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Participant Cost Test (PCT) | \$0 | \$0 | \$0 | | #DIV/0! |
| Ratepayer Impact (RIM) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| Societal Cost (SCT) | \$0 | \$420,000 | (\$420,000) | 0.00 | #DIV/0! |
| *Includes rebates paid to freeriders | | | | | |
| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project | |
| Total Utility Investment (\$) | \$420,000 | \$0 | \$0 | \$420,000 | |
| Electric Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 0 | 0 | 0 | 0 | |
| Critical Peak Hour Demand (kW) | 0 | 0 | 0 | 0 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (%) | | | | #DIV/0! | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| Financial Data | | | Secondary Benefits | | |
| Discount Rate: | 6.75% | | Other Savings | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | Scenarios: | | |
| Line Loss (Energy): | 6.30% | | Measure Life | 100% | |
| Line Loss (Demand): | 14.31% | | Energy Savings | 100% | |
| Avoided T&D Capacity \$/MW: | \$46,748 | | Avoided Energy Cost | 100% | |
| Environmental Adder (SCT only) | 10.00% | | Avoided Capacity Cost | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.01% | | Incremental Measure Cost | 100% | |
| Electric Retail Rate (\$/KWh): | \$0.08 | | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

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2020-2024 Program Development

Description

NV Energy's Program Development ("Program") explores DSM strategies by conducting small-scale tests of emerging products and/or services that may enhance its current portfolio or identify an opportunity for a new cost-effective DSM program. NV Energy implements this Program through the identification, assessment, and testing of technologies, appliances, measures, and delivery models.

The Program targets residential and small, medium, and large commercial, industrial, and/or agricultural customers for both Nevada Power and Sierra to identify ways to help them reduce their energy use and demand and save money.

2020 Results

The expenditure results for the Program for the 2020 program year are provided in Table DSM-33 below.

Table DSM-33: 2020 Program Development Expenditure Results

| 2020 Program Components | Program Budgets [1] | | |
|-------------------------|---------------------|------------------|-------------------------|
| | Authorized | Actual | Variance Over (Under) % |
| Nevada Power | | | |
| Program Development | \$200,000 | \$159,304 | (20.3%) |
| Sierra | | | |
| Program Development | \$100,000 | \$80,182 | (19.8%) |
| NV Energy | \$300,000 | \$239,487 | (20.2%) |

[1] Because this Program is based on developing new technologies, cost effectiveness is not measured or required.

2020 Overall Results and Activities

NV Energy selected a number of technologies that demonstrated a potential for enhancing the current DSM portfolio. The following field trials were conducted:

- Phase change materials ("PCM") for Nevada Power commercial customers;
- EV charging management for Nevada Power commercial and residential customers;
- Encycle integrations for Nevada Power commercial customers;
- Residential energy storage DR for Nevada Power and Sierra customers;
- Smart thermostat building management for Nevada Power and Sierra commercial customers;

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- Grid interactive water heaters for Nevada Power and Sierra residential and small and medium business customers.

Phase Change Materials Program Field Trial

For Nevada Power commercial customers, the PCM field trial in low temperature storage examines the use of materials similar to “Blue Ice” in commercial cold storage applications, such as walk-in freezers and large-scale cold storage facilities. Energy savings could be achieved by varying active refrigeration versus passive refrigeration. The use of PCM in cold storage solutions could also be used in DR events.

This desktop evaluation of data and results from projects completed for other utilities focused on a combination of advanced controls in conjunction with PCM in low temperature cold storage. The evaluation focused on the measure capabilities of Viking Cold Solutions for improving energy efficiency and providing energy storage for DR and long-term load shifting.

With the forecast of higher penetration for renewable generation on the grid, storage resources will become more important in the future. Storage solutions that are reliable and cost-effective will be important to meet this need.

The capabilities of both PCM and freezer controls are well studied and the combination of applying them together can leverage benefits beyond their individual benefit. Using this measure for energy storage provides storage without the typical roundtrip losses associated with other storage options.

A typical implementation would be to add additional controls and sensors to a large freezer and mount PCM module to the top of the pallet racks in the freezer. Energy used to change the phase of the material is consumed during off peak periods when energy is cheaper, and the outdoor ambient temperature is lower making the system more efficient. During peak periods, the compressors can be turned off and the PCM will cool the freezer as the phase change happens in the other direction.

The key elements reviewed in the evaluation were:

- Results consistent with previous studies and evaluation of the component measures;
- Metrics for measuring potential storage capacity of facilities;
- Potential methodology and feasibility of using measure for dispatchable DR.

2020 Lessons Learned and Recommendations

The recommendation is to identify one or two sites that would benefit from this PCM solution and add it to an existing DR or storage program for more in-depth testing in the local market. The lessons learned in this evaluation were:

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- The measure reduces kWh consumption;
- Long-term load shifting is possible (up to six hours);
- More stable freezer temperatures;
- Measure is a lower cost energy storage solution compared to batteries;
- Less long-term degradation of energy storage capacity over time.

EV Charging Management Program Field Trial

For Nevada Power customers, a field demonstration was conducted on two commercial facilities with existing EV charging stations to demonstrate dispatchable demand limiting test events and telemetry data collection. As charging stations are seeing more EV loads, managing the demand becomes important to ensure EV loads do not contribute to system strain during system peaks or emergencies, such as heat waves.

This demonstration primarily focused on the technical opportunity for the utility to reduce and shift EV charging demand. Dispatchable demand management of EV enables charging stations to shift charging demand and absorb excess generation from renewable resources.

2020 Lessons Learned and Recommendations

The following lessons and recommendations could be used to expand the NV Energy commercial Powershift DR program:

- Many charging stations do not have individual utility smart meters, thus requiring telemetry data for sub-metering analysis. The charging station telemetry data available through the utility portal was sufficient to develop charging station load profiles, which allowed charging peaks to be determined and observe real-time loads and capacity.
- Demand limiting events were successfully issued from the charging station utility portal, targeting the identified charging peaks, typically in the morning between 6:00 am and 11:00 am. With typical demand peaks for office building charging stations occurring outside of the grid system peak, charging station demand limiting is suited to supplement grid services, such as renewable generation load absorption.
- EV user feedback at the two stations was positive and the impact of the demonstration was minimal. To meet the customer expectations beyond the field demonstration will require that demand limiting does not impact achieving a full charge.
- Additional backend integrations will be completed in 2021 to integrate the existing two charging stations with the DR management system for dispatchable demand limiting events. On completion of these integrations, charging stations could become an additional measure in the existing Commercial DR program. This will require new models for

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customer participation incentives and ongoing DR participation compensation. The creation of a charging station demand limiting program will also support the existing EV and charging station incentives.

Encycle Integrations Program Field Trial

The Encycle Smart Thermostat integration field trial is directed towards Nevada Power commercial customers. This field trial focuses on using smart thermostats with Carrier, Honeywell, and Zen HQ commercial HVAC platforms.

This field evaluation focused on assessing the energy efficiency and DR capabilities of Encycle SwarmLogic applied to typical web connected thermostats made by Carrier and Honeywell. NV Energy has tested and deployed Encycle controllers in the past and they were effective in managing load and providing dispatchable DR.

This evaluation assessed the functions and capabilities of Encycle's online portal integrated with thermostats to provide a similar demand management and optimization solution as their controllers. This solution is less complicated and costs less to deploy than their controller-based solution. One local site that had a Honeywell thermostat installed and controlled using Encycle's SwarmStat portal was chosen and evaluated for this project.

The key elements reviewed in the evaluation were:

- SwarmStat portal functionality and user interface,
- DR methodology,
- DR event communication,
- Installation and commissioning process,
- SwarmStat optimization impact on energy efficiency.

2020 Lessons Learned and Recommendations

The recommendation is to add the Encycle SwarmStat solution as a measure to the commercial DR portfolio. This solution should be as effective for dispatchable DR as the current Pelican thermostat measure and also provides optimization to reduce kWh consumption. The lessons learned during the evaluation were:

- The existing connection between NV Energy's DRMS system and Encycle can be used to signal events for SwarmStat customer sites.
- Encycle's management portal is a comprehensive solution that provides facility managers a single site for managing their thermostats.

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- Carrier and Honeywell have contractors currently installing qualifying equipment that could be engaged in marketing the program.
- SwarmStat optimization showed kWh savings in addition to savings that would be achieved from upgrading to network connected thermostats.

Residential Energy Storage DR Program Field Trial

For Nevada Power and Sierra customers, a field demonstration was conducted that consisted of eleven residential homes with existing grid-connected battery energy storage systems. Residential energy storage systems provide customer benefits, such as peak demand reduction and backup power, with the potential to provide improved grid reliability and operation for the utility. This makes them reliable resources for load relief of peak grid demand through DR.

With each energy storage manufacturer supporting different communications' protocols for DR, no single communication method exists across all energy storage systems. This demonstration primarily focused on developing the technical interface for the utility to easily integrate with a fleet of battery energy storage systems from a single manufacturer. It provided incentives to interested customers with a solar system combined with energy storage to allow access to participate in test DR events and remotely retrieve historical and real-time telemetry data.

2020 Lessons Learned and Recommendations

The following lessons learned and recommendations could be used to expand the NV Energy residential PowerShift DR program:

- Onboarding interested participants was achieved remotely through the energy storage system cloud and did not require any hardware installation or site visits. A DR portal was developed to remotely register battery systems, collect telemetry data, and issue charge and discharge commands.
- Six interested participants were ineligible to participate due to incomplete or incorrectly commissioned systems. This would require customers to contact their battery installer to resolve the issues before they could become eligible for participation.
- A variety of utility smart meter and energy storage system sub-meter configurations were observed throughout the participating population. This resulted in inconsistencies of telemetry data values available, resulting in multiple methodologies to determine solar generation, battery activity, and home loads.
- Charge and discharge commands were successfully demonstrated through the DR portal and verified with the telemetry data. Additional backend integrations will be completed in 2021 to incorporate the existing fleet of storage systems with the DRMS for dispatchable DR event testing in the 2021 summer months.

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- Pending a successful field test of DR events, battery energy storage systems are a suitable candidate as an additional measure in the existing PowerShift residential DR program. This will require new models for customer participation incentives and ongoing DR participation compensation.

Smart Thermostat Building Management Program Field Trial

The smart thermostat building management field trial is for Nevada Power and Sierra commercial customers. This trial will investigate building management applications in small and medium commercial applications to control multiple thermostats for use as a DR resource. Building management provides master control of smart thermostat networks. Target recruitment will be government housing with master meters. This technology provides an economical alternative to the current commercial thermostat technologies with energy-savings technologies.

This field evaluation assessed the viability of the Ecobee SmartBuilding platform for managing Ecobee thermostats installed in a commercial environment. Ecobee thermostats are a well-known and tested product. Commercial facilities have more advanced needs for managing thermostats in their facilities that requires a centralized solution with distributed access.

This evaluation was focused on usability and functionality of the SmartBuilding platform. The evaluation looked at the portal from the customer and utility administrator's perspective. Installation, deployment, and setup of thermostats in the portal were evaluated and documented to determine if it would fit within the existing commercial thermostat program paradigm.

Key elements reviewed in the evaluation were:

- SmartBuilding functionality and user interface,
- DR methodology,
- DR event communication,
- Installation and commissioning process,
- Utility use of SmartBuilding to manage program participants.

Lessons Learned and Recommendations

The recommendation is to add the Ecobee thermostats and SmartBuilding solution as a measure to the commercial DR portfolio. This solution should be as effective for dispatchable DR as the current Pelican thermostat measure and does not require a gateway at each site. The lessons learned during the evaluation were:

- The SmartBuilding portal is a mature and functional portal that is easy to use.

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- The existing connection between NV Energy's DRMS system and Ecobee can be used to signal events for SmartBuilding customer sites.
- Small sites with one or two thermostats would benefit from Ecobee's more consumer focused product.
- Ecobee tools for utility management and deployment of new sites are functional but could be enhanced.

Grid Interactive Water Heaters Program Field Trial

For Nevada Power and Sierra residential customers, a field demonstration was conducted with one commercial and three residential sites to demonstrate dispatchable demand limiting test events and telemetry data collection. As new technologies develop to easily internet-enable water heaters, there is a potential to provide improved grid reliability and operation for the utility, while providing end-users new capabilities to view energy usage and make energy efficiency decisions.

Two internet-enabled solutions were evaluated to address different classes of eligible participants. Customers who upgrade to new heat-pump water heaters can receive DR commands through the built-in smart thermostat. Customers with an existing electric water heater can retrofit a water heater controller that upgrades the existing controls to a smart thermostat. This demonstration primarily focused on developing the technical interface for the utility to easily integrate with a fleet of grid-interactive water heaters from multiple manufacturers.

2020 Lessons Learned and Recommendations

The following lessons and recommendations could be used to expand the NV Energy residential PowerShift DR program:

- Onboarding the heat-pump water heater was achieved remotely through the device cloud registration, while the water heater controller retrofit required equipment installation and cloud registration. A DR portal was developed to remotely register grid interactive water heater control for two manufacturers, collect telemetry data, and issue charge and discharge commands.
- From the collected telemetry data, demand peaks were identified and targeted for DR events. Pre-heat and tank temperature setback commands were successfully issued from the DR portal. Although peak usage periods were identified in historical data, heating was not always running during the periods targeted for DR test events.
- Internet-enabling water heaters provided customers with remote access to view their energy usage, adjust the heating schedule, and apply energy efficiency modes. This typically addressed periods of unnecessary heat cycles to maintain setpoints during no occupancy.
- Additional backend integrations will be completed in 2021 to incorporate the existing fleet of grid interactive water heaters with the DRMS for dispatchable DR event testing in the

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2021 summer months. On completion of these integrations, grid interactive water heaters could become an additional measure in the existing PowerShift residential DR program. This will require new models for customer participation incentives and ongoing DR participation compensation.

2020 Field Trial Reports

The final Program reports on results and field trials are provided in Technical Appendix DSM-18.

2021 Plan

The authorized budgets for the Program for the 2021 program year are provided in Table DSM-34 below.

Table DSM-34: 2021 Program Development Authorized Budgets

| 2021 Program Components | Authorized Budgets [1] |
|--|-------------------------------|
| Nevada Power Field Trials | |
| Residential Pool Pumps Load Management | \$53,143 |
| Advanced Grid Interactive Water Heater Integrations | \$29,143 |
| Dynamic Rate Optimization | \$23,143 |
| Hotel Guest Room Low Cost, DR Enabled Thermostats | \$18,143 |
| DR Optimization Potential on 2-Stage AC Systems | \$13,143 |
| Multifamily/ Low-Income Non-Wi-Fi Thermostats | \$40,143 |
| Electric Vehicle Charging Management with DR and Distributed Energy Resource | \$23,143 |
| Nevada Power Total | \$200,000 |
| Sierra Field Trials | |
| Smart Agricultural DR Demonstration | \$68,667 |
| Advanced Grid Interactive Water Heater Integrations | \$17,667 |
| Low Cost ERV Assessment | \$13,667 |
| Sierra Total | \$100,000 |
| NV Energy | \$300,000 |

[1] Because this Program is based on developing new technologies, cost effectiveness is not measured or required.

NV Energy selected the following technologies to evaluate for the 2021 Plan year:

- Residential pool pumps load management for Nevada Power residential customers.
- Smart agricultural DR demonstration for Sierra commercial irrigation customers.
- Advanced grid interactive water heaters for Nevada Power and Sierra residential customers.
- Dynamic rate optimization for Nevada Power residential customers.

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- Hotel guest room low cost, DR enabled thermostats for Nevada Power commercial customers.
- DR optimization potential on two-stage AC systems for Nevada Power residential customers.
- Low cost energy recovery ventilator (“ERV”) for Sierra residential customers.
- Multi-family, low-income, non-Wi-Fi thermostats for Nevada Power residential customers.
- Electric vehicle charging management with DR and distributed energy resource for Nevada Power commercial customers.

Residential pool pumps load management will field test DR enabled pool pump technology. The long range, low-power wide-area network (“LoRa”) protocol will be investigated as an alternative to Wi-Fi for extend range to outdoor pumps. Dispatchable DR events will be tested during the summer months.

Smart agricultural DR demonstration will field test newer DR enabled technologies at the existing Irrigation Sites (“IS-2”). A white paper is being completed on this subject. Two tiers of technology will be lab- and field-tested and evaluated for options targeting manual pump motors and options targeting variable frequency drive (“VFD”) pump motors.

The advanced grid interactive water heaters field trial addresses the need for year-round DR resources and focuses on two technologies: electric resistive water heaters and heat pump water heaters. The technologies have internet accessible controls and data acquisition. The water heaters will achieve energy savings by customers using the programing capabilities and participating in DR events. The trial is primarily focused on residential applications, although small and medium commercial customers could also benefit from these technologies. The evaluation of existing sites in the southern territory and new sites in the northern territory in 2021 will be included to complete the study.

Dynamic rate optimization will investigate DR enabled technologies to reduce customer bills with the critical peak pricing and daily demand pricing rates without excessively impacting their comfort. Five homes will be recruited to evaluate combinations of photovoltaic generation (“PV”), battery storage, and thermostat demand reduction strategies. Simulations will be conducted on four existing Nevada Power installations at Villa Trieste, while one Sierra site is already participating and on the critical peak pricing and daily demand pricing rates. This will utilize a combination of Ecobee thermostats and a home automation gateway (Hourly DR gateway, Samsung SmartThings, etc.)

Hotel guest room low-cost, DR-enabled thermostats will lab- and field-test long-range, low-power, wide-area network thermostats for the hotel and motel guest room applications. The Application Programming Interface (“API”) integrations will DR-enable the thermostats for test events throughout the summer. With a LoRa gateway installed in the management office, only one internet connection is needed and there is no need for internet access in the individual units.

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DR optimization potential on two-stage AC systems will evaluate control strategies on previously installed systems. This will assess whether running a single stage of cooling through a DR event; rather than shutting the system down with a temperature set back, will reduce customer DR overrides, while maintaining the kW reduction. The enabling technology will be the Ecobee thermostats.

Low cost ERV will field test at least one low-cost ERV in an existing home or new construction (model home). The effectiveness of using a low-cost ERV compared to the whole house indoor blower for fresh air ventilation will be evaluated.

Multi-family, low-income, non-Wi-Fi thermostats will evaluate long range, low-power, wide-area network protocol thermostats in multi-family and low-income properties with an on-site management office. API integrations will DR enable the thermostats for test events throughout the summer. With a LoRa gateway installed in the management office, only one internet connection is needed and there is no need for internet access in the individual units.

EV charging management with DR and DER will complete the study using two existing ChargePoint sites at NV Energy's Pearson and Beltway locations for evaluating commercial chargers. One residential Tesla site will be recruited for the residential chargers. This pilot will be completed in 2021 with the two existing charge point sites connected and tested for control through the DRMS database, using OpenADR 2.0 two-way communications protocols.

2021 Plan Changes

There are no anticipated changes for program year 2021.

2022-2024 Proposed Plans

The proposed budgets for the Program for the 2022 through 2024 program years are provided in Table DSM-35 below.

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Table DSM-35: 2022-2024 Program Development Proposed Budgets

| 2022-2024 Program Components | Proposed Budgets [1] |
|-------------------------------------|-----------------------------|
| 2022 | |
| Nevada Power | |
| Program Development | \$200,000 |
| Sierra | |
| Program Development | \$70,000 |
| NV Energy | \$270,000 |
| 2023 | |
| Nevada Power | |
| Program Development | \$200,000 |
| Sierra | |
| Program Development | \$70,000 |
| NV Energy | \$270,000 |
| 2024 | |
| Nevada Power | |
| Program Development | \$200,000 |
| Sierra | |
| Program Development | \$70,000 |
| NV Energy | \$270,000 |

[1] Because this Program is based on developing new technologies, cost effectiveness is not measured or required.

NV Energy's 2022 through 2024 Program will continue to explore DSM strategies by conducting small-scale tests of emerging products and/or services that may enhance its current portfolio or identify an opportunity for a new cost-effective DSM program. NV Energy will continue to implement this Program through the identification, assessment, and testing of technologies, appliances, measures, and program delivery models.

The Program will continue to target residential and small, medium, and large commercial, industrial, and/or agricultural customers for both Nevada Power and Sierra to identify ways to help them reduce their energy use and demand and save money.

2022-2024 Proposed Plan Enhancements

If the preliminary pilot programs are projected to be cost effective, the programs primarily affected will be the Residential DR, Residential AC and Commercial DR. The general measures will be advanced technologies that are commonly used or will be commonly used in the near future and will be utilized during community demand response events. These new measures will be adopted into the existing DR and AC programs. These measures and future measures that will be evaluated will be increasingly considered for their ability to integrate into a diverse measure environment. That environment could include various energy storage methods, solar generation, electric vehicles and existing DR resources managed with a DERMS that maximizes the value these resources provide.

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Residential Services Programs Data Sheet**

Section 6 – Residential Services Programs

Residential Services Overview

A variety of residential services will be available to approximately 1,117,000 residential electric customers who traditionally occupy single-family or multi-family homes. To address this varied set of customers, NV Energy will offer a bundled set of products and services targeted to reach the vast majority of the residential market and provide customers with multiple opportunities to participate.

The segment of residential services programs is designed to reach thousands of customers annually. The programs are implemented in an integrated fashion, which allows a large number of customers to participate and benefit from one or more of the products and services offered.

The DSM portfolio of residential services programs focuses on educating customers on energy efficiency. Additionally, this category of programs provides customers with simple ways to participate and make long-term commitments to reduce energy usage. The portfolio of residential services for 2020 and 2021 includes Residential Lighting, Residential Pool Pumps, Residential High Efficiency AC, Low Income, Direct Install, and Residential DR programs, which are all augmented by the Education Services programs: Energy Education, Energy Assessments, and Energy Reports.

The DSM portfolio of residential services for 2022 through 2024 includes Residential Equipment and Plug Loads (includes legacy High Efficiency AC and Pool Pumps), Residential Codes and New Construction, Low Income, Direct Install and Deep Retrofits, Residential DR, and In-home Energy Assessments programs, which are all augmented by the Education Services programs: Energy Education, Online Energy Assessments, and Energy Reports.

The proposed Residential Services budgets, energy (kWh) and demand (kW) savings for the Programs for the 2022 through 2024 action plan period are provided in Table DSM-36 below.

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Residential Services Programs Data Sheet

Table DSM-36: 2022-2024 Residential Services Proposed Budgets and Savings Targets

| Programs | Proposed Budget | Annual Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Annual Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Annual Demand Savings (kW) | Annual Energy Savings (kWh) |
|--|---------------------|----------------------------|-----------------------------|---------------------|----------------------------|-----------------------------|---------------------|----------------------------|-----------------------------|
| Nevada Power | 2022 | | | 2023 | | | 2024 | | |
| Residential Equipment and Plug Loads | \$5,600,000 | 3,383 | 9,600,000 | \$5,800,000 | 3,428 | 10,100,000 | \$5,900,000 | 3,454 | 10,400,000 |
| Residential Codes and New Construction | \$420,000 | 160 | 596,000 | \$1,100,000 | 440 | 1,640,000 | \$1,560,000 | 1,126 | 4,200,000 |
| Low Income | \$2,220,000 | 164 | 1,350,000 | \$2,312,000 | 172 | 1,417,500 | \$2,392,000 | 182 | 1,503,375 |
| Direct Install and Deep Retrofits | \$680,000 | 528 | 2,140,000 | \$740,000 | 588 | 2,320,000 | \$800,000 | 654 | 2,500,000 |
| Residential Demand Response - Build & Manage | \$15,000,000 | 195,000 | 25,900,000 | \$15,700,000 | 208,000 | 28,900,000 | \$16,500,000 | 221,000 | 31,200,000 |
| In-Home Energy Assessments | \$1,070,000 | 768 | 2,000,000 | \$1,070,000 | 768 | 2,000,000 | \$1,070,000 | 768 | 2,000,000 |
| Residential Services Total | \$24,990,000 | 200,003 | 41,586,000 | \$26,722,000 | 213,396 | 46,377,500 | \$28,222,000 | 227,184 | 51,803,375 |
| Sierra | 2022 | | | 2023 | | | 2024 | | |
| Residential Equipment and Plug Loads | \$800,000 | 212 | 1,400,000 | \$880,000 | 233 | 1,610,000 | \$930,000 | 246 | 1,740,000 |
| Residential Codes and New Construction | \$280,000 | 100 | 400,000 | \$720,000 | 351 | 1,400,000 | \$1,040,000 | 876 | 3,500,000 |
| Low Income | \$704,000 | 40 | 300,000 | \$731,000 | 40 | 300,000 | \$756,000 | 40 | 300,000 |
| Direct Install and Deep Retrofits | \$370,000 | 153 | 800,000 | \$390,000 | 177 | 900,000 | \$410,000 | 197 | 1,000,000 |
| Residential Demand Response - Build & Manage | \$2,750,000 | 15,251 | 2,250,000 | \$2,800,000 | 16,000 | 2,850,000 | \$2,900,000 | 16,000 | 3,360,000 |
| In-Home Energy Assessments | \$380,000 | 215 | 600,000 | \$380,000 | 215 | 600,000 | \$380,000 | 215 | 600,000 |
| Residential Services Total | \$5,284,000 | 15,971 | 5,750,000 | \$5,901,000 | 17,016 | 7,660,000 | \$6,416,000 | 17,574 | 10,500,000 |
| NV Energy | 2022 | | | 2023 | | | 2024 | | |
| Residential Equipment and Plug Loads | \$6,400,000 | 3,595 | 11,000,000 | \$6,680,000 | 3,661 | 11,710,000 | \$6,830,000 | 3,700 | 12,140,000 |
| Residential Codes and New Construction | \$700,000 | 260 | 996,000 | \$1,820,000 | 791 | 3,040,000 | \$2,600,000 | 2,002 | 7,700,000 |
| Low Income | \$2,924,000 | 204 | 1,650,000 | \$3,043,000 | 212 | 1,717,500 | \$3,148,000 | 222 | 1,803,375 |
| Direct Install and Deep Retrofits | \$1,050,000 | 681 | 2,940,000 | \$1,130,000 | 765 | 3,220,000 | \$1,210,000 | 851 | 3,500,000 |
| Residential Demand Response - Build & Manage | \$17,750,000 | 210,251 | 28,150,000 | \$18,500,000 | 224,000 | 31,750,000 | \$19,400,000 | 237,000 | 34,560,000 |
| In-Home Energy Assessments | \$1,450,000 | 983 | 2,600,000 | \$1,450,000 | 983 | 2,600,000 | \$1,450,000 | 983 | 2,600,000 |
| Residential Services Total | \$30,274,000 | 215,974 | 47,336,000 | \$32,623,000 | 230,412 | 54,037,500 | \$34,638,000 | 244,758 | 62,303,375 |

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Residential Lighting Program Data Sheet

2020-2021 Residential Lighting Program

Description

NV Energy's Residential Lighting program ("Program") was designed to deliver high-efficiency lighting to NV Energy's residential customers through participating retailers. The Program was implemented through an upstream model that collaborates with manufacturers and retailers, while providing discounted pricing on LED lamps at the point of purchase for instant discounts to customers. Program measures consist of ENERGY STAR®-qualified general service, reflectors, and specialty lighting. The lamps were available in various wattage equivalents and lighting characteristics. Through this buy down mechanism, the retail price encouraged and motivated residential customers to replace less efficient lighting with high-efficiency LEDs that provided energy savings and longer lamp life than other lighting technology.

High-efficiency LED products are typically higher in price than less efficient alternatives. LED products consume a fraction of the wattage for the same lighting quality and intensity over an extended useful life thus lowering energy consumption and energy costs for the customer. The rated lamp life of a typical LED could exceed 10,000 hours compared to only 1,000 hours of many inefficient lighting alternatives. The qualifying LED lamps included in the Program were ENERGY STAR® certified, offer energy savings, are longer lasting, and include features, such as color quality and light output.

NV Energy customers found the qualifying LEDs at participating retailers throughout Nevada, including Costco, Lowe's, Sam's Club, The Home Depot, Goodwill Stores, Dollar General, Walmart, Ace Hardware, Batteries Plus, Do it Best, Dollar General, Target, and True Value.

2020 Results

The expenditures and demand and energy savings results for the Program for the 2020 program year are provided in Table DSM-37 below.

Table DSM-37: 2020 Residential Lighting Expenditures, Savings, and Unit Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Units | | |
|-------------------------------|--------------------|--------------------|----------------------------------|-------------------|-------------------|----------------------------------|--------------|--------------|----------------------------------|----------------|----------------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Residential Lighting | \$1,840,000 | \$1,858,170 | 1.0% | 20,444,444 | 27,662,471 | 35.3% | 2,015 | 2,858 | 41.8% | 688,778 | 989,653 | 43.7% |
| Sierra | | | | | | | | | | | | |
| Residential Lighting | \$1,000,000 | \$791,368 | (20.9%) | 10,000,000 | 14,138,607 | 41.4% | 1,041 | 1,461 | 40.4% | 342,845 | 400,258 | 16.7% |
| NV Energy | \$2,840,000 | \$2,649,538 | (6.7%) | 20,444,445 | 27,662,472 | 35.3% | 2,016 | 2,859 | 41.8% | 688,779 | 989,654 | 43.7% |

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Sierra Pacific Power Companies d/b/a NV Energy
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2020 Overall Results Activities

The onset of COVID-19 in 2020 led to a unique program year, which saw the end of in-person store visits starting in March. As a result of the health and safety challenges, the Program team moved to virtual store visits, making successful use of strong relationships with store personnel and employing cell phone technology to bridge the engagement gap.

The Program sales were 989,653 lamps in Nevada Power's service territory. With this level of sales, Nevada Power achieved savings of 27,662,471 kWh, which represent 135 percent of its energy savings target, and 2,858 kW, which represent 142 percent of its demand savings target, while spending 101 percent of the authorized budget.

The Program sales were 400,258 lamps in Sierra's service territory. With this level of sales, Sierra achieved savings of 14,138,607 kWh, which represent 141 percent of its energy savings target, and 1,461 kW, which represent 140 percent of its demand savings target, while spending 79 percent of the authorized budget.

Prior to March 2020, the Program team conducted routine visits to the 151 retail stores throughout NV Energy's service territories. These visits included training of retail staff, on-site discussions with customers, checking on placement of Program collateral, continued implementation of contracted discounts, and engagement with new staff members in the retail outlets.

A sample shelf survey was conducted in 2020 on lighting products sold throughout NV Energy's service territories. This study was conducted to understand market share of efficient versus inefficient lighting products. The results, which showed an ample selection of bulbs that would not be compliant with the new standard going into effect on January 1, 2021, provided insight into the availability and accessibility of efficient and inefficient lighting, the incremental cost of LED lamp compared to inefficient alternative, and the relative impact of LED incentive programs on customer purchase decisions..

There are no significant differences in Program delivery between NV Energy's north and south service territories. Retail locations were selected in zip codes wherein a minimum of 100 NV Energy customers resided. The goal was to increase likelihood of NV Energy customer patronage and Program participation. The retail locations in more rural areas, such as Hawthorne, Winnemucca, and Elko were also included in the Program.

2020 Lessons Learned and Recommendations

The 2020 Program built upon the successes of the 2019 re-introduction year. Recommendations in prior program M&V reports that were implemented included revisiting baseline lamp assumptions, and re-evaluating hours of use. Feedback from prior Program implementation teams was incorporated, which included increased focus on retail staff training, Program education and improvements in customer collateral, increased emphasis on ENERGY STAR® value proposition, and improved utilization of communication outreach and web content to leverage the trusted relationship with NV Energy. In addition, customer collateral and web page content demonstrated

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an increased emphasis on consistently displaying and linking the PowerShift brand to the NV Energy brand.

Several new initiatives and activities were implemented following the passage of Assembly Bill 54 (2019) (“AB54”)⁶⁰ and pursuant to the orders in Docket Nos. 20-07004. In Docket No. 20-07004, the Commission accepted a stipulation, pursuant to which the Program is to be phased out during 2021 on account of the new lighting standard taking effect.⁶¹ Training was conducted with the implementation team to ensure understanding of AB54 and the Orders that pertained to the 2021 Program. In the last quarter of 2020, field teams began to advise retailer points of contact of key elements of AB54 and the terms of eventual termination of the Program during 2021.

2021 Plan

The authorized budgets, projected demand and energy savings targets, and participant goals for the Program for the 2021 program year are provided in Table DSM-38 below.

Table DSM-38: 2021 Residential Lighting Authorized Budgets, Savings Targets, and Unit Goals

| 2021 Program Components | Authorized Budget Goal | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Units Goal |
|--------------------------------|-------------------------------|--|---|-------------------|
| Nevada Power | | | | |
| Residential Lighting | \$1,040,000 | 1,201 | 16,000,000 | 635,385 |
| Sierra | | | | |
| Residential Lighting | \$600,000 | 594 | 7,000,000 | 326,622 |
| NV Energy | \$1,640,000 | 1,202 | 23,000,000 | 962,007 |

The key objective in 2021 is to capitalize on the successes achieved in 2020 and to use the established relationships with manufacturers and retailers as a platform for success during the transition period leading up to the termination of the Program on June 30, 2021.

Pursuant to AB 54, no general service lamp may be sold in Nevada on or after January 1, 2020, unless it meets or exceeds the minimum standard of energy efficiency of 45 lumens per watt. In compliance with Docket No. 20-07004, NV Energy must adopt the new AB 54 energy efficiency baseline for the retail lighting Program and cannot offer incentives after June 30, 2021, for the purchase of general service lamps under the previous baseline.⁶² NVE Energy will respond to this requirement in two phases.

⁶⁰ AB 54 authorized the Governor’s Office of Energy to promulgate regulations adopting a new standard for light bulbs sold in Nevada. Pursuant to the adopted regulations, as reflected in LCB File No. R100-19, the new lighting standard went into effect on January 1, 2021.

⁶¹ November 16, 2020, Order at 5-8.

⁶² *Id.*

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1. During the transition period from January 1, 2021, thorough June 30, 2021, the Program continues to be delivered the same way as in the 2020 Program year and will be available in more than 100 participating retail outlets in NV Energy's north and south service territories. Retail outlets will vary by category from big box stores, such as Costco, Sam's Club, and Target, to bargain retailers like Dollar General and Do It Best. More than 30 bargain retailer locations are included in the Program with the specific intent to ensure that customers with limited incomes can conveniently participate in the Program.
2. Phase two will begin on July 1, 2021. As a result of retailer requirements and specific manufacturer lead time requirements, some retail stores will terminate rebated sales during the transition period, in the April 2021 to May 2021 timeframe. However, all rebated LED sales will end on or before June 30, 2021. Also, during phase two, a trial Residential Food Bank program will be launched that will provide a 4-pack of LED bulbs to selected food banks and food pantries for distribution to households seeking food support services.

2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year:

- During the Transition Period, January 1, 2021, through June 30, 2021, NV Energy continues to monitor the retail lighting marketplace and provides monthly reporting of the retail lighting market to NV Energy's DSM Collaborative. The reporting includes (1) the types of covered lamps offered to consumers for purchase, (2) the percentage of shelf space that is allocated to compliant bulbs covered under AB 54, (3) the percentage of shelf space that is allocated to non-compliant bulbs covered under AB 54, (4) the percentage of shelf space that is allocated to bulbs not covered under AB 54. The final report will be delivered in December 2021.
- Unspent budget funds are planned and expected because of the June 30, 2021, termination of the rebated LED program. A portion of the unspent funds will be made available for use by other DSM programs. A second portion of the unspent funds will be directed at the low-income segment of the Companies' customer base and used to stand-up an LED distribution offering through Food Banks and food pantries in northern and southern Nevada. The Food Bank offering will provide a 4-pack of LED bulbs to patrons of participating Food Banks/Pantries. This portion of the Program is estimated to reach 13,000 households and deliver an estimated 1,000,000 kWh in energy savings. Education and outreach events are planned along with patron surveys to establish clear attribution to NV Energy and to obtain information on LED replacements and use. The Food Bank program will also be used to educate low-income customers about other NV Energy customer assistance programs and to cross-market other DSM programs that are available to qualified applicants.

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2022-2024 Proposed Plan

A Residential Lighting program is not being proposed for the 2022 through 2024 Action Plan Period.

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-07 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-07 and DSM-17, which are calculated by the third-party evaluator, ADM.

Incremental Costs

Incremental costs are derived from the shelf study conducted in late 2019 as well as data from the previous program years. For each LED product, the Manufacturers Suggested Retail Price (“MSRP”) was collected from sampled retail locations. The targeted data for MSRP was the cost of the product before any manufacturer or retailer discount and program incentive. Incremental Measure Cost estimates by product type and retailer type were calculated using a weighted average of MSRP determined by subtracting inefficient lighting weighted average MSRP from efficient lighting weighted average MSRP.

Incentives/Rebates

The Program incentives are paid directly to the manufacturer based on retail sales to NV Energy’s customers. The average incentive across all measures is approximately \$0.60 per lamp. The incentive structure is based on an LED lamp sales projection, lamp retail pricing, potential lamp energy savings, and the propensity of customer to purchase LED lamps.

Measure Life

As determined in the Program’s M&V Report, the EUL is 8.4 years for Nevada Power and 8.2 years for Sierra.

Measure Units

A unit for this Program is a single LED lamp.

Savings

The verified energy savings averaged 27.95 kWh per unit for Nevada Power and 35.32 kWh per unit for Sierra.

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Financial Analysis

Financial assumptions are provided in Section 4 of this DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program has an overall cost effectiveness NTRC score for 2020 of 1.55 for Nevada Power and 1.81 for Sierra.

Nevada Power Input and Output Sheets

Nevada Power - Residential Lighting

| 2020 | Total Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Bulbs | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|--------------------------------|--------------------|---------------------|----------------------|------------|-----------------|-----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$1,858,170 | \$188,947 | \$1,078,880 | \$590,343 | | | | | | |
| A-Line | | | | | 458,254 | 24 | 11,015,621 | 8.4 | \$4 | 60.0% |
| Bulged Reflector | | | | | 294,192 | 34 | 9,932,084 | 8.4 | \$2 | 60.0% |
| Candle | | | | | 7,700 | 21 | 160,059 | 8.4 | \$3 | 60.0% |
| Globe | | | | | 60,103 | 27 | 1,615,996 | 8.4 | \$3 | 60.0% |
| Parabolic Aluminized Reflector | | | | | 36,901 | 42 | 1,543,471 | 8.4 | \$0 | 60.0% |
| Reflector | | | | | 49,979 | 30 | 1,479,829 | 8.4 | \$1 | 60.0% |
| Specialty | | | | | 82,524 | 23 | 1,915,411 | 8.4 | \$2 | 60.0% |
| Total | | | | | 989,653 | 28 | 27,662,471 | 8.4 | \$3 | 60.0% |

| | | | |
|-------------------------|---------------------------|------------------------------|-----------------------------------|
| Name: | 2020 Residential Lighting | Last Updated: | 5/25/2021 19:52 |
| Customer Sector: | Residential | Avg Measure Life: | 8.40 |
| Region : | Vegas | Energy Savings Curve: | Residential Lighting |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|--------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$5,409,399 | \$3,482,651 | \$1,926,747 | 1.55 | \$0.030 |
| Total Resource Cost (TRC) | \$4,703,825 | \$3,482,651 | \$1,221,174 | 1.35 | \$0.030 |
| Utility Cost Test (UCT) | \$4,703,825 | \$1,858,170 | \$2,845,655 | 2.53 | \$0.016 |
| Participant Cost Test (PCT) | \$18,829,498 | \$2,707,469 | \$16,122,028 | 6.95 | \$0.014 |
| Ratepayer Impact (RIM) | \$4,703,825 | \$12,801,662 | (\$8,097,837) | 0.37 | \$0.111 |
| Societal Cost (SCT) | \$5,734,253 | \$3,482,651 | \$2,251,602 | 1.65 | \$0.030 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|------|------|---------------|
| Total Utility Investment (\$) | \$1,858,170 | \$0 | \$0 | \$1,858,170 |
| Electric Benefits (\$) | \$599,276 | \$0 | \$0 | \$4,703,825 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 17,429,570 | 0 | 0 | 146,408,390 |
| Critical Peak Hour Demand (kW) | 1,761 | 0 | 0 | 1,761 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,339,951 | 0 | 0 | 11,240,797 |
| Total On Peak Hours (%) | | | | 7.68% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 60.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential Lighting Program Data Sheet

| | | | |
|-------------------------|----------------------|------------------------------|-----------------|
| Name: | Residential Lighting | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 8.40 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:52 |
| Start Year: | 2020 | | |
| End Year: | 2020 | <i>ACE guru™ Model</i> | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$5,409,402 | \$3,482,161 | \$1,927,241 | 1.55 | \$0.040 |
| Total Resource Cost (TRC) | \$4,703,828 | \$3,482,161 | \$1,221,667 | 1.35 | \$0.040 |
| Utility Cost Test (UCT) | \$4,703,828 | \$1,858,170 | \$2,845,658 | 2.53 | \$0.021 |
| Participant Cost Test (PCT) | \$18,829,498 | \$2,706,652 | \$16,122,845 | 6.96 | \$0.031 |
| Rate Payer Impact (RIM) | \$4,703,828 | \$12,801,662 | (\$8,097,834) | 0.37 | \$0.146 |
| Societal Cost (SCT) | \$5,782,985 | \$3,482,161 | \$2,300,824 | 1.66 | \$0.040 |

**Includes rebates paid to freeriders*

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|---|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,858,170 | \$0 | \$0 | \$1,858,170 |
| Electric Benefit (\$) | \$599,276 | \$0 | \$0 | \$4,703,828 |
| Gas Benefit (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 17,429,570 | 0 | 0 | 146,408,390 |
| Critical Peak Hour Demand (kW) | 1,761 | 0 | 0 | 1,761 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 1,338,190 | 0 | 0 | 11,240,797 |
| Total on Peak Hours (%) | | | | 7.68% |

**Savings in this Section are Adjusted for Line Loss and Net-to-Gross*

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios: | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52.165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.82 | | |
| Net-to-Gross Ratio | 60.0% | | |

Sierra Input and Output Sheets

Sierra - Residential Lighting

| 2020 | Total Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Bulbs | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|--------------------------------|--------------------|---------------------|----------------------|------------------|-----------------|-----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$791,368 | \$96,536 | \$450,169 | \$244,663 | | | | | | |
| A-Line | | | | | 226,256 | 30 | 6,835,119 | 8.2 | \$4 | 55.0% |
| Bulged Reflector | | | | | 103,913 | 50 | 5,237,384 | 8.2 | \$2 | 55.0% |
| Candle | | | | | 5,173 | 26 | 135,853 | 8.2 | \$3 | 55.0% |
| Globe | | | | | 23,673 | 19 | 452,658 | 8.2 | \$3 | 55.0% |
| Parabolic Aluminized Reflector | | | | | 13,021 | 42 | 552,982 | 8.2 | \$0 | 55.0% |
| Reflector | | | | | 12,969 | 40 | 519,539 | 8.2 | \$1 | 55.0% |
| Specialty | | | | | 15,253 | 27 | 405,073 | 8.2 | \$2 | 55.0% |
| Total | | | | | 400,258 | 35 | 14,138,608 | 8.2 | \$3 | 55.0% |

| | | | |
|-------------------------|---------------------------|------------------------------|----------------------------------|
| Name: | 2020 Residential Lighting | Last Updated: | 5/25/2021 18:57 |
| Customer Sector: | Residential | Avg Measure Life: | 8.20 |
| Region : | Reno | Energy Savings Curve: | Residential Lighting |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsx |
| End Year: | 2020 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$2,601,820 | \$1,433,665 | \$1,168,155 | 1.81 | \$0.026 |
| Total Resource Cost (TRC) | \$2,262,452 | \$1,433,665 | \$828,787 | 1.58 | \$0.026 |
| Utility Cost Test (UCT) | \$2,262,452 | \$791,368 | \$1,471,084 | 2.86 | \$0.015 |
| Participant Cost Test (PCT) | \$7,659,155 | \$1,167,812 | \$6,491,343 | 6.56 | \$0.012 |
| Ratepayer Impact (RIM) | \$2,262,452 | \$4,869,339 | (\$2,606,887) | 0.46 | \$0.090 |
| Societal Cost (SCT) | \$2,755,324 | \$1,433,665 | \$1,321,659 | 1.92 | \$0.026 |

**Includes rebates paid to freeriders*

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|---|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$791,368 | \$0 | \$0 | \$791,368 |
| Electric Benefits (\$) | \$293,292 | \$0 | \$0 | \$2,262,452 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 8,299,076 | 0 | 0 | 68,052,425 |
| Critical Peak Hour Demand (kW) | 930 | 0 | 0 | 930 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 276,384 | 0 | 0 | 16,503,709 |
| Total On Peak Hours (%) | | | | 24.25% |

**Savings in this section are adjusted for line loss and net-to-gross*

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 55.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential Lighting Program Data Sheet

| | | | |
|-------------------------|----------------------|------------------------------|-----------------|
| Name: | Residential Lighting | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 8.20 |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:03 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| Notes: | ACE guru™ Model | | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$2,601,820 | \$1,433,444 | \$1,168,376 | 1.82 | \$0.021 |
| Total Resource Cost (TRC) | \$2,262,452 | \$1,433,444 | \$829,008 | 1.58 | \$0.021 |
| Utility Cost Test (UCT) | \$2,262,452 | \$791,368 | \$1,471,084 | 2.86 | \$0.012 |
| Participant Cost Test (PCT) | \$7,659,155 | \$1,167,411 | \$6,491,744 | 6.56 | \$0.017 |
| Rate Payer Impact (RPI) | \$2,262,452 | \$4,869,339 | (\$2,606,887) | 0.46 | \$0.072 |
| Societal Cost (SCT) | \$2,755,324 | \$1,433,444 | \$1,321,880 | 1.92 | \$0.021 |

*Includes Rebates Paid to Presiders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$791,368 | \$0 | \$0 | \$791,368 |
| Electric Benefit (\$) | \$293,292 | \$0 | \$0 | \$2,262,452 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 8,299,076 | 0 | 0 | 68,052,425 |
| Critical Peak Hour Demand (kW) | 930 | 0 | 0 | 930 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 275,454 | 0 | 0 | 2,258,726 |
| Total on Peak Hours (%) | | | | 3.32% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate | 6.75% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 6.30% | Measure Life | 100% |
| Line Loss (Demand) | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-to-Gross Ratio | 55.00% | | |

Nevada Power Companies d/b/a as NV Energy Residential Pool Pumps Program Data Sheet

2020-2021 Residential Pool Pumps Program

Description

NV Energy's Residential Pool Pumps program ("Program") provides incentives for upgrading inefficient single-speed pumps to more energy-efficient variable-speed pumps and for the calibration of new and existing variable-speed pumps. Swimming pool filtration pumps are estimated to be the second largest user of energy in residential homes with swimming pools. The majority of the existing pool pumps are conventional, single-speed units.

Replacing an inefficient single-speed pump with a variable-speed pump can decrease energy use by up to 80 percent. This is achieved by operating the pool pump at optimal speeds with additional savings achieved by properly sizing the pool pump for the application. Variable-speed pool pumps run quieter and operate to reduce heat and friction losses within the motor for additional energy savings and longer equipment life.

The Program is available only to Nevada Power customers and implemented through participating retail outlets, approved pool professionals, pool builders and distributors, and a Do-It-Yourself ("DIY") channel. The Program provides incentives to industry partners to offer instant, point-of-purchase discounts on variable-speed pumps and incentives for ensuring optimal calibration of existing variable-speed pumps. Calibration of existing variable-speed pumps may occur in-person by an industry partner or virtually by the program implementor.

While the Program's primary delivery is through retail pool outlets and service providers, there is a DIY option available to customers. To qualify, the customer must purchase and install a new qualifying variable-speed pool pump and verify that the pool pump has been calibrated by a pool service professional, trained, and certified by the Program.

2020 Results

The expenditures, demand and energy savings, and participant results for the Program for the 2020 program year are provided in Table DSM-39 below.

Table DSM-39: 2020 Residential Pool Pumps Expenditures, Savings, and Participants Results

| 2020 Program Component | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|------------------------------|----------------|-----------|----------------------------------|-------------|-----------|----------------------------------|------------|----------|----------------------------------|--------------|----------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Pool Pumps | \$1,150,000 | \$872,063 | (24.2%) | 7,666,667 | 3,872,180 | (49.5%) | 2,320 | 1,390 | (40.1%) | 2,400 | 1,395 | (41.9%) |
| Nevada Power Total | \$1,150,000 | \$872,063 | (24.2%) | 7,666,667 | 3,872,180 | (49.5%) | 2,320 | 1,390 | (40.1%) | 2,400 | 1,395 | (41.9%) |

Nevada Power Companies d/b/a as NV Energy Residential Pool Pumps Program Data Sheet

2020 Overall Results and Activities

The Program targeted customers who owned swimming pools and those who expressed online interest in pools, and pool-related equipment. To the extent that limited-income homeowners and renters fit the target pool profile, they were exposed to outbound marketing and ultimately invited to participate in the Program.

The 2020 Program achieved 3,872,180 kWh in energy savings or 51 percent of its energy savings target and 1,390 kW or 60 percent of its demand targets while expending 76 percent of the authorized budget. The primary contributor to the underperformance was the overall impact of the COVID-19 pandemic. Personal safety precautions, beginning the first quarter 2020, limited in-person interactions with key personnel in retail outlets and hampered recruitment of pool professionals who are normally engaged during pool professional meetings and gatherings.

There were 1,405 rebates issued for the installation of qualifying variable speed pumps. A \$220 incentive per pump was provided as an instant discount to the customer when the pump was installed and calibrated by a pool service professional, who had been trained and certified by the Program. To stimulate additional sales through the pool professional channel, a \$25 incentive was provided to approved pool professionals who installed and calibrated a variable speed pumps for eligible pool pump customers.

The Program took advantage of numerous opportunities to meet with interested and eligible customers and key members of the pool industry. Early in the year, informational events were held at distributor locations where licensed contractors purchase the majority of the variable speed pumps sold in southern Nevada. In response to the worsening COVID-19 pandemic, by the end of the first quarter of 2020, face-to-face meetings were revised in favor of virtual meetings, telephone conferences, and email blasts.

During 2020, the Program made several improvements:

- With in-person interactions curtailed due to the pandemic, technology was engaged to fill the void. A virtual calibration and inspection tool were used to allow field staff to keep pace with installation quality inspections and to assist customers remotely in cases where pool calibrations proved difficult to obtain. During the program year, 115 virtual inspections were conducted.
- Virtual appointments were scheduled where customers, using video chat features, could be guided through a virtual inspection of a previous pump installation or guided through a pool-pump calibration. The Program utilized Power Business Intelligence (BI) data to develop customer assortments that would inform marketing messages and geographic targets. In addition to focusing on the segments' preferred outlets, the Program also developed language for marketing that directly addressed the low-income customers. Data shows that low-income customers connect better with marketing that emphasizes saving money first, followed by saving energy. Due to COVID-19 concerns, the strategy in 2020 was revised to put a greater focus on emergency repairs, with messaging that was geared toward connecting with low-income customers.

Nevada Power Companies d/b/a as NV Energy Residential Pool Pumps Program Data Sheet

2020 Lessons Learned and Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years:

- The installation and calibration documentation requirements were reduced to include only the essential elements needed to ensure the identity of the NV Energy customer; that a single-speed pump was being replaced with a qualifying variable-speed pump installation; and that the proper calibration was performed.
- Improvements in the online application process helped speed up identification of missing information and reduced the overall processing time. As a result, customers and contractors received rebates and incentives faster than in the past.
- Customer and key partner education continued to be paramount in facilitating the communication of Program advantages and benefits. Customer surveys stressed the importance of customer education about pool-pump calibration and proper pool operations and maintenance.
- The Program enjoyed participation from customers across a wide range of household incomes. An analysis of past participants revealed that 28 percent of customers in the southern market who own pools fell below the median household income level of \$54,694.

2021 Plan

The authorized budgets, projected demand and energy savings targets, and participant goals for the Program for the 2021 program year are provided in Table DSM-40 below.

Table DSM-40: 2021 Residential Pool Pumps Authorized Budget, Savings Targets, and Participant Goals

| 2021 Program Components | Authorized Budget Goal | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------|-------------------------------|--|---|-------------------------|
| Pool Pumps | \$750,000 | 755 | 2,625,000 | 1,178 |
| Nevada Power Total | \$750,000 | 755 | 2,625,000 | 1,178 |

The key objective in 2021 is to capitalize on 2020 momentum and established relationships with pool-pump manufacturers, distributors, pool installers, pool service professionals, and retail outlets. Leslie's retail outlets will continue to be the most heavily courted partner.

Effective July 19, 2021, new Department of Energy ("DOE") regulations will go into effect that require Dedicated Purpose Pool Pumps ("DP3") manufactured in or imported into the U.S. meet minimum energy efficiency standards. The standards apply to all pool pumps with a Hydraulic Horsepower ("HHP") rating ≤ 2.5 HHP, with some limited exceptions. HHP is approximately 50 percent of the pump motor's Total Horsepower ("THP") rating. Most pool pumps with a motor

Nevada Power Companies d/b/a as NV Energy Residential Pool Pumps Program Data Sheet

rating of 5.0 THP or less will be required to meet the minimum energy efficiency standards. The requirement will essentially preclude the manufacturing, but not the selling, of most single speed pumps 1 HHP and above. The manufacture of single speed pumps will be halted after July 19, 2021, but not the manufacture and installation of single speed motors. The program is monitoring the resulting pricing and availability of variable speed pumps and the availability, sale, and installation of single speed pool pump motors.

Education will continue to be the emphasis to motivate customers and key partners. The Program will leverage membership in the Community Association Institute to gain better access to pool owners in master-planned communities.

NV Energy will launch a PowerShift Smart Shop in 2021. The PowerShift Smart Shop will support the delivery and implementation of approved programs by creating an online platform to educate customers about existing DSM programs and enable customers to purchase competitively priced energy saving products. The PowerShift Smart Shop will provide a channel for customers to purchase authorized variable speed pumps as well as act on tips and recommendations provided by their Online Energy Assessment. The PowerShift Smart Shop will be treated as a marketing expense and will not change program budget goals.

2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year:

- The Program has increased emphasis on engaging pool-pump distributors, new pool builders, and pool service professionals. The three main pool-equipment distributors were recruited into the program in 2020. Third-party pool service and new pool start-up professionals will be recruited as a means to engage new pool builders. Recurring attendance at meetings of the United Pool Association and the Independent Pool and Spa Service Association created opportunities for Program training and recruitment.
- The Program will institute a new variable-speed pump calibration initiative to ensure qualified existing variable speed pool pumps are optimizing energy savings. The calibrations will occur in-person or virtually and will leverage the Program call center for leads and attribution. The 2019 Measurement and Verification report stated that “41 percent of pumps had to be recalibrated because the efficient settings had been changed since installation.”
- The application process has been enhanced to support both mail-in and online submissions. The paper-based, mail-in application has been streamlined to include only the essential data needed for application processing. The online application features are a digital input form to speed up the application processing and significantly reduces the application processing time. Many online pool-pump applications can be processed, and checks issued to customers in ten working days.
- The Program has increased reliance on social media, including Facebook and digital display ads to increase customer awareness and to stimulate demand. Using Google

Nevada Power Companies d/b/a as NV Energy Residential Pool Pumps Program Data Sheet

analytics, the impact of targeted digital media campaigns is tracked and evaluated for overall effectiveness.

- The Program delivery will continue to be impacted by COVID-19 in 2021 and will rely on ongoing and new strategies to replace in-person field visits with virtual technology, online education, and phone interactions. Field teams will contact store personnel via phone to confirm that the discounts will continue and inquire if there is a need for additional outreach material or if there are any changes to store operating hours, available inventory, or customer traffic.

2022-2024 Proposed Plan

The Program will transition as a component of the new Residential Equipment and Plug Load Program. The data for implementation can be found in the 2022 through 2024 Residential Equipment and Plug Loads program.

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-15 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-15 and DSM-17, which are calculated by the third-party evaluator ADM.

Incremental Costs

The Program's incremental cost for a single speed pump replacement due to operational failure is considered a replacement at burnout. For replacement at burnout, the incremental cost is the cost of a variable-speed pool pump minus the cost of the code compliant single-speed pool pump minus the incentive offered by the Program. If the single speed pump is still fully functional, upgrading to a variable-speed pump is considered an early replacement. For early replacement, the incremental cost is the cost of the variable-speed pool pump minus the incentive offered by the Program.

A base case measure is the single-speed pool pump or repair or replacement with a single-speed pump motor. The average energy efficiency measure cost was determined by analyzing actual invoice data for variable-speed pumps that have been covered by this Program from 2020 through 2022. Average base case measure cost was determined by analyzing manufacturer, retailer, and distributor cost data for single-speed pool pumps. The incremental costs used in this analysis are provided in the input sheet.

Nevada Power Companies d/b/a as NV Energy Residential Pool Pumps Program Data Sheet

Incentives/Rebates

The Program includes both incentives and rebates to encourage customers and pool partners to participate. The incentive is \$245 per unit. The incentive is provided as a pass through to customers and the discount is shown on the customer invoice. A rebate of \$220 is provided directly to customers who select the Do-it-Yourself purchase and installation option following the calibration of the pool pump by an authorized pool calibrator.

Measure Life

As determined in the M&V Report for the Program, the EUL for the Program is 10 years.

Measure Units

A unit, for the purposes of the Program, is a single variable-speed pool pump.

Savings

The verified energy savings were 2,756 kWh per unit for Nevada Power.

Financial Analysis

Financial assumptions are provided in Section 4 of this DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program had an overall cost effectiveness NTRC score for 2020 of 1.29 for Nevada Power.

Nevada Power Input and Output Sheets

Nevada Power - Pool Pumps

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Rebate / Incentives per unit | Annual Savings (kWh/ unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|--|---------------------------|---------------------|----------------------|------------|---------|---------------------------------|------------------------------|----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$872,063 | \$118,972 | \$293,844 | \$459,247 | \$0 | | | | | | | |
| Variable Speed Pump (contractor installed) | | | | | | 1,061 | \$245 | 2,756 | 2,924,116 | 10.0 | \$588 | 70.0% |
| Variable Speed Pump (DIY) | | | | | | 344 | \$220 | 2,756 | 948,064 | 10.0 | \$588 | 70.0% |
| Total | | | | | | 1,405 | \$239 | 2,756 | 3,872,180 | 10.0 | \$588 | 70.0% |

Nevada Power Companies d/b/a as NV Energy Residential Pool Pumps Program Data Sheet

| | | | |
|-------------------------|-----------------|------------------------------|-----------------------------------|
| Name: | 2020 Pool Pumps | Last Updated: | 5/25/2021 19:53 |
| Customer Sector: | Residential | Avg Measure Life: | 10.00 |
| Region : | Vegas | Energy Savings Curve: | Pool Pumps |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,874,531 | \$1,450,401 | \$424,130 | 1.29 | \$0.068 |
| Total Resource Cost (TRC) | \$1,629,119 | \$1,450,401 | \$178,718 | 1.12 | \$0.068 |
| Utility Cost Test (UCT) | \$1,629,119 | \$872,063 | \$757,056 | 1.87 | \$0.041 |
| Participant Cost Test (PCT) | \$3,354,324 | \$826,196 | \$2,528,128 | 4.06 | \$0.027 |
| Ratepayer Impact (RIM) | \$1,629,119 | \$2,898,617 | (\$1,269,498) | 0.56 | \$0.136 |
| Societal Cost (SCT) | \$1,936,320 | \$1,450,401 | \$485,920 | 1.34 | \$0.068 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$872,063 | \$0 | \$0 | \$872,063 |
| Electric Benefits (\$) | \$187,623 | \$0 | \$0 | \$1,629,119 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 2,846,414 | 0 | 0 | 28,464,138 |
| Critical Peak Hour Demand (kW) | 1,062 | 0 | 0 | 1,062 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 533,266 | 0 | 0 | 5,322,038 |
| Total On Peak Hours (%) | | | | 18.70% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.06% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 70.0% | | |

| | | | |
|-------------------------|-------------|------------------------------|-----------------|
| Name: | Pool Pumps | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 10.00 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:52 |
| Start Year: | 2020 | | |
| End Year: | 2020 | ACE guru™ Model | |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,874,531 | \$1,450,397 | \$424,135 | 1.29 | \$0.073 |
| Total Resource Cost (TRC) | \$1,629,120 | \$1,450,397 | \$178,723 | 1.12 | \$0.073 |
| Utility Cost Test (UCT) | \$1,629,120 | \$872,063 | \$757,056 | 1.87 | \$0.044 |
| Participant Cost Test (PCT) | \$3,354,324 | \$826,191 | \$2,528,133 | 4.06 | \$0.041 |
| Rate Payer Impact (RIM) | \$1,629,120 | \$2,898,617 | (\$1,269,497) | 0.56 | \$0.145 |
| Societal Cost (SCT) | \$1,945,629 | \$1,450,397 | \$495,232 | 1.34 | \$0.073 |

*Includes Rebates Paid to Freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$872,063 | \$0 | \$0 | \$872,063 |
| Electric Benefit (\$) | \$187,623 | \$0 | \$0 | \$1,629,120 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 2,846,414 | 0 | 0 | 28,464,138 |
| Critical Peak Hour Demand (kW) | 1,062 | 0 | 0 | 1,062 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 532,204 | 0 | 0 | 5,322,038 |
| Total on Peak Hours (%) | | | | 18.70% |

*Savings in this section are adjusted for Line Loss and Net-to-Gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | <u>Scenarios</u> | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.06% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-to-Gross Ratio | 70.0% | | |

Nevada Power Companies d/b/a as NV Energy

Residential High Efficiency AC Program Data Sheet

2020-2021 Residential High Efficiency AC Program

Description

The Residential High Efficiency AC program (“Program”) encourages Nevada Power customers to make energy-efficient upgrades to existing AC units and heat pumps. The Program achieves summer-peak demand reduction and long-term energy savings. Higher-efficiency systems that replace existing residential central systems can receive incentives under the program based on the efficiency level of the new system. The Program also incentivizes homebuilders to install high-efficiency AC units and heat pumps in newly constructed homes. Additionally, builders can earn incentives if new homes meet high efficiency AC-related home envelope measures criteria. Program dollars have been set aside for low-income customers to offer them AC systems tune-ups.

Participating customers receive incentives at the time of purchase of a new system. The incentive applied appears on the customer’s receipt, which was coordinated through equipment distributors for single- and multi-family customers. Owners of newly built homes and existing home retrofits have the benefit of reduced AC energy costs for the lifetime of the equipment. Low-income customers benefit through improved system performance and lower monthly expenses for their AC use.

Program delivery streamlines incentive payment through equipment distributors and builders reducing any inconvenience to customers. Existing home retrofit equipment and savings documentation is captured in a web portal simplifying data collection on installations and savings verification. The new construction measure utilizes a whole-home model to determine savings and to document equipment and home configuration. Export files from the model allow the detailed post verification of claimed savings. The limited income tune-ups are provided through training contractors requiring minimal customer engagement. To assure quality, the training contractors utilize “measure Quick HVAC,” an application which documents system tune-up specifics.

2020 Results

The expenditures, demand and energy savings, and participant results for the Program for the 2020 program year are provided in Table DSM-41 below.

Table DSM-41: 2020 Residential High Efficiency AC Expenditures, Savings, and Participants Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|------------------------------|----------------|-------------|-------------------------|-------------|-----------|-------------------------|------------|----------|-------------------------|--------------|----------|-------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Residential Air Conditioning | \$4,000,000 | \$3,648,110 | (8.8%) | 6,666,667 | 5,378,586 | (19.3%) | 4,439 | 3,126 | (29.6%) | 4,100 | 4,696 | 14.5% |
| Nevada Power Total | \$4,000,000 | \$3,648,110 | (8.8%) | 6,666,667 | 5,378,586 | (19.3%) | 4,439 | 3,126 | (29.6%) | 4,100 | 4,696 | 14.5% |

Nevada Power Companies d/b/a as NV Energy Residential High Efficiency AC Program Data Sheet

2020 Overall Results and Activities

The 2020 Program achieved 5,378,586 kWh or 80.7 percent of its energy savings target and 3,126.4 kW or 70.4 percent of its demand savings targets while expending 91.2 percent of the approved budget. As a result, the Program served 4,696 unique participants and delivered 5,218 program measures in 2020. The available budget enabled the program to establish effective incentive levels to attract industry and customer participation throughout the year. COVID-19 impacted program performance due to limited customer contact and specifically adversely affected low-income tune-ups during the spring and early summer, which is normally the prime season for tune-ups.

Customers who were laid off or had mandatory reduced working hours, due to the effect of COVID-19 restrictions could only repair their AC units, rather than replace them. Energy efficiency was a lower priority during these times where incomes were reduced.

The Program supported customers through its incentives for select AC systems that exceeded current building code in southern Nevada.

The Program in 2020 was a midstream model, like in the previous year, where program incentives were delivered through industry distributors to installation contractors and customers. Incentives for high-efficiency systems ranged from \$150 to \$1,600 based on the efficiency level of the system installed and whether it was for new construction or existing home replacement. Both single- and multi-family residences qualified for the Program. System verification was achieved by recording new system specifications versus the system that was replaced during the retrofit. New construction measures were also documented, and data was provided via the web portal for review, inspection, and verification. New construction rebates for AC units moved to a whole-home modeling approach by calculating energy saving relating to the air condition system efficiency level plus other efficiency attributes relating to the building envelope. Once the modeling measure was introduced, builders migrated to the measure and the traditional new home measure was slowly phased out during the year. The Ekotrope model, a software used for rating a home by HERS raters to determine the level of energy efficiency relative to the baseline home, was used for the new home measure which has streamlined the documentation process and the third-party measure and verification evaluation.

Customer awareness was generated through various PowerShift campaigns. Specific engagement and training activities were provided through professional associations and program trade allies on the value of the program in promoting high-efficiency AC systems by teleconferences.

Limited income system tune-ups were introduced in 2020 and were delivered through Program-trained and approved industry contractors. The Program verified customers receiving free system tune-ups met the required low-income criteria by verifying the customer address is located within the US Department of Housing and Urban Development Opportunity Zone. In order to broaden the reach of the limited income measures, the Program consulted with the Department of Community Housing and Development, Southern Nevada Regional Housing Authority, and the Nevada Rural Housing Authority.

Nevada Power Companies d/b/a as NV Energy Residential High Efficiency AC Program Data Sheet

2020 Lessons Learned and Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years:

- The strategy to achieve Program success was maintaining the support of key market partners and influencers. Program distributors were trained and encouraged to apply incentives to equipment that enables contractors to sell and install high-efficiency systems. Contractors must be educated on the short-term and long-term benefits of installing high-efficiency AC units and heat pumps. The Program will improve support to contractors to aid them with the requisite skills to educate customers on the benefits of high-efficiency systems. Experience has shown that distributor and contractor participation rates are interrelated with the incentive levels. It is recommended that once incentives are established for a given program year, they should remain relatively consistent throughout the year.
- An essential aspect of success hinges on contractors' interface with customers and their ability to communicate the many variables to consider when purchasing a high-efficiency AC unit. The Program will further enhance the program website to aid customers on better understanding high efficiency AC benefits, what they need to consider when buying a new system, and to establish reasonable expectation from the local professional industry.

2021 Plan

The authorized budgets, projected demand and energy savings targets, and participant goals for the Program for the 2021 program year are provided in Table DSM-42 below.

Table DSM-42: 2021 Residential High Efficiency AC Authorized Budgets, Savings Targets, and Participant Goals

| 2021 Program Components | Authorized Budget Goal | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--|-------------------------------|--|---|-------------------------|
| Residential High Efficiency Air Conditioning | \$3,300,000 | 2,759 | 5,400,000 | 1,761 |
| Nevada Power Total | \$3,300,000 | 2,759 | 5,400,000 | 1,761 |

The Program will operate in a similar manner as the 2020 implementation. The Program will leverage the lessons learned in previous years for the replacement of existing systems, expand measures in new construction, and expand and tighten the execution of the limited income component. Program funding and goals for 2021 are above.

- Program distributor enrollment will increase, and, within the local industry, there is a greater acceptance of the midstream program model. Program distributors are suppliers that sell AC units to local contractors for installation of HVAC units. Current incentive levels are encouraging participation for early retirement and replacement on burnout of

Nevada Power Companies d/b/a as NV Energy Residential High Efficiency AC Program Data Sheet

systems. The limited income component will continue providing system tune-ups to qualifying customers. Tune-ups will provide services to improve system performance by replacing air filters, cleaning condenser coil for improved heat transfer performance, and refrigerant and air flow adjustment during the diagnostic assessment.

- The Program will continue incentivizing high-efficiency systems, using the Ekotrope model, installed by builders during the construction of new homes. These measures incentivize builders to move to higher efficiency AC units and heat pumps than the systems required under the current building code. The new construction component will continue to be an important contribution to program savings.
- Continued program evaluation will be critically important to the overall success. Regular review of performance will provide insights into original assumptions, assist in identifying problems and opportunities not previously recognized allowing informed mid-season corrections, which will increase overall Program outcomes.
- NV Energy will roll out a PowerShift Smart Shop for this Program as an additional marketing tool for digital energy efficiency engagement channel for customers. This will support the delivery and implementation of approved programs through the implementation of a PowerShift Smart Shop for residential customers. The online PowerShift Smart Shop will be a marketing expense and will not change the Program's budget goals.

2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year:

- The data upload requirement for DSMC database has and will continue to be streamlined following data requirements reviews. Blank or unnecessary fields have been removed allowing flexibility to include certification numbers (i.e. Air Conditioning Heating Refrigeration Institute ("AHRI") and DOE), which aids in verification of the efficiencies of installed AC and heating systems.
- Improvements to the online intake tools used to collect measure data from contractors will add increased data verification checks to improve data consistency, which will reduce data entry errors and improve application processing by adding drop down menus.
- Increase of limited income offerings to include window and wall unit tune ups.
- Pursuant to the stipulation in the DSM Update Docket No. 20-07004, upon the Residential Lighting program phase out in the second part of 2021, the Program will receive the freed-up funding.⁶³ The Companies are currently estimating the amount of the additional Program funding and evaluating potential Program enhancements.

⁶³ October 8, 2020, Stipulation at 8.

Nevada Power Companies d/b/a as NV Energy

Residential High Efficiency AC Program Data Sheet

2022-2024 Proposed Plan

The Residential AC Program will transition as a component of the Residential Equipment and Plug Loads Program. The data for implementation can be found in the 2022 through 2024 Residential Equipment and Plug Loads program data sheet.

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-10 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-10 and DSM-17, which are calculated by the third-party evaluator ADM.

Incremental Costs

There is a total of three incremental cost types, two scenarios under the Program for incremental cost for replacements and one for the tune-ups:

- Replacement on Burnout – Replacement on burnout incremental cost is equal to the full cost of the higher-efficiency system minus the full cost of a new base-efficiency system.
- Early Replacement – Early replacement incremental cost is equal to the full cost of the new higher-efficiency system.
- Low-Income AC Tune-up – The cost of an HVAC tune-up derived from industry survey data minus the average cost of incentives paid during the Program year.

Incentives/Rebates

The Program makes incentive payments to manufacturers or distributors to reduce the customers out-of-pocket cost by offering the reduced unit price to the contractor. The customers see the incentive payment on their invoice as a line item reduction for their new system. Incentives range from approximately \$150 to \$1,600 per unit depending on the size and efficiency of the AC.

Measure Life

As determined in the M&V Report for the Program, the EUL for the Program was 18.2 years for Nevada Power.

Measure Units

For the Program, a unit of measure is defined as early replacement, replacement on burnout, new home installation, or a tune-up of a customer's AC unit.

Nevada Power Companies d/b/a as NV Energy

Residential High Efficiency AC Program Data Sheet

Savings

The savings per unit for each Program component range from 180 kWh to more than 1,500 kWh.

Financial Analysis

Financial assumptions are provided in Section 4 of the DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program has an overall cost effectiveness NTRC score for 2020 of 0.99 for Nevada Power.

Nevada Power Input and Output Sheets

Nevada Power - Residential High Efficiency Air Conditioning

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Total Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|------------------------|---------------------------|---------------------|----------------------|-------------|---------|-----------------|------------------|---------------|-----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$3,648,110 | \$351,166 | \$1,051,040 | \$2,238,004 | \$7,900 | | | | | | | | |
| High performance homes | | | | | | 1,853 | \$0 | \$0 | 1,271 | 2,354,696 | 25.0 | \$465 | 82.0% |
| New Construction | | | | | | 1,478 | \$0 | \$0 | 523 | 772,564 | 17.7 | \$275 | 82.0% |
| Retrofit | | | | | | 1,408 | \$6 | \$7,900 | 1,537 | 2,164,743 | 11.4 | \$1,089 | 82.0% |
| Tune Ups | | | | | | 479 | \$0 | \$0 | 181 | 86,583 | 5.0 | \$125 | 82.0% |
| Total | | | | | | 5,218 | \$0 | \$7,900 | 1,031 | 5,378,586 | 18.2 | \$548 | 82.0% |

Name:

Customer Sector:

Region :

Start Year:

End Year:

Notes:

2020 Residential AC
Residential
Vegas
2020
2020

Last Updated:

Avg Measure Life:

Energy Savings Curve:

Model File Name:

CAD File Name:

Program DB Name:

5/25/2021 19:54
18.16
High Efficiency AC
DSM_PortPro_April2021_AY.xlsm
Vegas_CAD_April2021_AY.xlsx
PD_Vegas_2020PY_April2021_AY.xlsx

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$5,901,368 | \$5,988,112 | (\$86,744) | 0.99 | \$0.126 |
| Total Resource Cost (TRC) | \$5,124,451 | \$5,988,112 | (\$863,661) | 0.86 | \$0.126 |
| Utility Cost Test (UCT) | \$5,124,451 | \$3,648,109 | \$1,476,343 | 1.40 | \$0.077 |
| Participant Cost Test (PCT) | \$7,772,555 | \$2,861,561 | \$4,910,994 | 2.72 | \$0.049 |
| Ratepayer Impact (RIM) | \$5,124,451 | \$8,179,964 | (\$3,055,512) | 0.63 | \$0.172 |
| Societal Cost (SCT) | \$6,066,114 | \$5,988,112 | \$78,002 | 1.01 | \$0.126 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|------|------|---------------|
| Total Utility Investment (\$) | \$3,648,109 | \$0 | \$0 | \$3,648,109 |
| Electric Benefits (\$) | \$385,066 | \$0 | \$0 | \$5,124,451 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 4,631,551 | 0 | 0 | 84,105,954 |
| Critical Peak Hour Demand (kW) | 2,384 | 0 | 0 | 2,384 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,295,982 | 0 | 0 | 23,490,909 |
| Total On Peak Hours (%) | | | | 27.93% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | Secondary Benefits | |
|---|--------------------------|------|
| Discount Rate: | 7.14% | |
| Rate Escalator: | 0.00% | |
| Inflation Rate (T&D): | 2.00% | |
| Line Loss (Energy): | 4.77% | |
| Line Loss (Demand): | 9.93% | |
| Avoided T&D Capacity \$/MW: | \$52,165 | |
| Environmental Adder (SCT only) | 10.00% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.16% | |
| Electric Retail Rate (\$/KWh): | \$0.10 | |
| Gas Retail Rate (\$/therm) | \$0.62 | |
| Net-To-Gross Ratio | 82.0% | |
| | Other Savings | \$0 |
| | Scenarios: | |
| | Measure Life | 100% |
| | Energy Savings | 100% |
| | Avoided Energy Cost | 100% |
| | Avoided Capacity Cost | 100% |
| | Incremental Measure Cost | 100% |

Nevada Power Companies d/b/a as NV Energy

Residential High Efficiency AC Program Data Sheet

| | | | |
|------------------|----------------|-----------------------|-----------------|
| Name: | Residential AC | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 18.16 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:52 |
| Start Year: | 2020 | | |
| End Year: | 2020 | ACE guru™ Model | |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$5,901,371 | \$5,988,110 | (\$86,739) | 0.99 | \$0.087 |
| Total Resource Cost (TRC) | \$5,124,454 | \$5,988,110 | (\$863,656) | 0.86 | \$0.087 |
| Utility Cost Test (UCT) | \$5,124,454 | \$3,648,110 | \$1,476,344 | 1.40 | \$0.053 |
| Participant Cost Test (PCT) | \$7,772,556 | \$2,861,559 | \$4,910,998 | 2.72 | \$0.041 |
| Rate Payer Impact (RIM) | \$5,124,454 | \$8,179,965 | (\$3,055,511) | 0.63 | \$0.119 |
| Societal Cost (SCT) | \$6,091,094 | \$5,988,110 | \$102,984 | 1.02 | \$0.087 |

*Includes Rebates Paid to Free riders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$3,648,110 | \$0 | \$0 | \$3,648,110 |
| Electric Benefit (\$) | \$385,065 | \$0 | \$0 | \$5,124,454 |
| Gas Benefit (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 4,631,551 | 0 | 0 | 84,105,954 |
| Critical Peak Hour Demand (kW) | 2,384 | 0 | 0 | 2,384 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 1,293,599 | 0 | 0 | 23,490,909 |
| Total on Peak Hours (%) | | | | 27.93% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | <u>Scenarios</u> | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.16% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-to-Gross Ratio | 82.0% | | |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Residential Equipment and Plug Load Program Data Sheet**

2022-2024 Residential Equipment and Plug Load Program

Description

The Residential Equipment and Plug Load Program (“Program”) is an incentive program that targets residential end users with the highest energy consumption per square foot and those expected to significantly increase their energy consumption per square foot with additional energy loads, including cooling and heating, appliances, electronics, and pool pumps.

Combining retrofit rebates into one program introduces program operational efficiencies, improves the customer experience, increases overall program awareness and streamlines the overall rebate process. By combining all measures into one program, customers who apply to receive rebates for multiple measures will interface with just one platform including all eligible measures, even if there are multiple implementers processing the rebates. The “one-stop shop” approach will increase program awareness, reduce installation time and the potential time away from employment.

NV Energy is committed to increasing the participation of low-income customers in its energy saving programs and wants to provide customers with more opportunities to save while ensuring only qualified customers participate and all projects meet program requirements.

NV Energy currently implements a stand-alone Residential Pool Pump Program and Residential AC Program. The Pool Pump Program and portions of the Residential AC Program will be combined with Plug Loads and Appliances to form the new Residential Equipment and Plug Load Program in 2022. To provide customers with choices and more opportunities for participation, program requirements will employ multiple delivery channels throughout the program cycle. Measures could be offered midstream, downstream or through a PowerShift Smart Shop.

Launching the new measures, gaining market awareness and integrating the measures for optimum efficiency, including, creating marketing, outreach channels and promotional materials will not be immediate. Therefore, participation levels are expected to be lower in 2022 and ramp up in 2023 and 2024, when the program is expected to be fully integrated and operational in multiple channels. This is accounted for in both the savings and budget assumptions. Any changes in the assumptions such as, but not limited to, program launch date or program participation may impact savings or budget numbers.

Initially the Program includes the following measures:

- ENERGY STAR Refrigerators,
- ENERGY STAR Freezers,
- ENERGY STAR Clothes Washers,
- ENERGY STAR Clothes Dryers,

**Nevada Power Companies d/b/a as NV Energy
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Residential Equipment and Plug Load Program Data Sheet**

- ENERGY STAR Air Purifiers,
- ENERGY STAR Printers (Ink Jet),
- ENERGY STAR Room Air Conditioners,
- ENERGY STAR Variable-Speed Pool Pumps (available to Nevada Power customers),
- Low Flow Faucet Aerator,
- Low Flow Showerhead, and
- Upgrades for high efficiency ACs and heat pumps of existing residential central systems if the replacement system exceeds code.

Low flow faucet aerators and low flow showerheads will only be offered to customers with electric water heating. The Program will also support the Residential DR program by including ENERGY STAR plus (+) connected appliances (such as refrigerators, clothes washers, clothes dryers, room air conditioners, variable speed pool pumps) with two-way communication capabilities.

2020 Results and 2021 Plan

This is a new program for the 2022 through 2024 action plan period and was not run in 2020 or 2021.

2022-2024 Proposed Plans

The proposed budget, projected demand and energy savings, and participant goals for the Program for the 2022 through 2024 program years are provided in Table DSM-43 below.

Table DSM-43: 2022–2024 Residential Equipment and Plug Load Proposed Budgets, Savings Targets, and Unit Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Units Goal |
|--------------------------------------|--------------------|-----------------------------------|------------------------------------|---------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Residential Equipment and Plug Loads | \$5,600,000 | 3,383 | 9,600,000 | 11,440 |
| Sierra | | | | |
| Residential Equipment and Plug Loads | \$800,000 | 212 | 1,400,000 | 4,610 |
| NV Energy | \$6,400,000 | 3,595 | 11,000,000 | 16,050 |
| 2023 | | | | |
| Nevada Power | | | | |
| Residential Equipment and Plug Loads | \$5,800,000 | 3,428 | 10,100,000 | 13,092 |
| Sierra | | | | |
| Residential Equipment and Plug Loads | \$880,000 | 233 | 1,610,000 | 3,923 |
| NV Energy | \$6,680,000 | 3,661 | 11,710,000 | 17,015 |

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Residential Equipment and Plug Load Program Data Sheet

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Units Goal |
|--------------------------------------|--------------------|-----------------------------------|------------------------------------|---------------|
| 2024 | | | | |
| Nevada Power | | | | |
| Residential Equipment and Plug Loads | \$5,900,000 | 3,454 | 10,400,000 | 13,783 |
| Sierra | | | | |
| Residential Equipment and Plug Loads | \$930,000 | 246 | 1,740,000 | 5,014 |
| NV Energy | \$6,830,000 | 3,700 | 12,140,000 | 18,797 |

Vetting and Incorporating New Measures: The Program will monitor the market and will look to add applicable new cost-effective measures throughout the action plan period.

Plug Load and Appliances: A curated set of common household appliances and electronic plug loads will be promoted and incentivized by the Program. Cross-marketing strategies will link to other DSM Programs, including links to low-income offerings implemented by other DSM programs. The Program will have two rebate tiers: a standard tier and a low-income qualified tier for selected measures.⁶⁴ The low-income qualified tier is designed to rebate a higher portion of the measures' incremental cost, providing additional financial incentives for low-income customers.

Residential Air Conditioning: Measures for residential AC improvement will encourage customers in both Nevada Power and Sierra to make energy-efficiency upgrades to existing air conditioners and heat pumps. The focus will be on summer-peak demand reduction and long-term energy savings with higher-efficiency systems that replace existing residential central systems. Customers can receive incentives under the program based on the efficiency level of the new system. Incentives for homebuilders to install high-efficiency AC and heat pumps in new homes will be included in the Residential Codes and New Construction Program.

The Program will deliver support to customers replacing their old inefficient and non-operating AC systems with high-efficiency systems. Approximately 50 to 70 percent of residential energy usage is attributed to the AC unit energy consumption. Measures specifically for low-income customers will include tune-ups at no cost for customers. The Program team will work with various databases to qualify income-qualified customers for these targeted incentives.

Residential Pool Pumps: The Pool Pump measure will be offered only to Nevada Power residential customers. The Program will increase education efforts to foster customers' understanding of the annualized and lifetime savings possible from variable-speed pool pumps. The Program will closely monitor the impact of the new DOE regulations on the availability and pricing of variable speed pumps as well as the pricing and inventory levels of single speed pumps and single speed motor repair alternatives.

⁶⁴ The tiered incentive levels apply to ENERGYSTAR Refrigerators, ENERGY STAR Freezers, ENERGY STAR Clothes Washers, ENERGY STAR Clothes Dryers, ENERGY STAR Air Purifiers, ENERGY STAR Printers (Ink Jet), ENERGY STAR Room Air Conditioners, Low Flow Faucet Aerator, and Low Flow Showerhead.

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Sierra Pacific Power Companies d/b/a NV Energy
Residential Equipment and Plug Load Program Data Sheet**

Stronger links with low-income strategies implemented by other DSM programs will be established, including adding a survey for participants of the NV Energy Low Income Program to identify customers with pools. Targeted outreach will be directed to these low-income pool owners as well as outreach to income-qualified customers enrolled in NV Energy's Energy Assistance Program, Project REACH. Feedback from 2020 M&V Report emphasized the significance of the pool pump rebate in the decision to upgrade to a variable speed pump.

A two-tier plan will offer increased incentives to income-qualified customers for replacement of single speed pumps. In addition, low-income pool owners will be eligible for discounts on re-calibration of eligible variable speed pumps and re-commissioning of existing variable-speed pool pumps. This will continue to save customers energy by ensuring the existing pump settings are optimized for energy savings.

Measurement and Verification

M&V reports will be provided for program years 2022 through 2024, if the Program is approved by the Commission.

Energy Savings Curves

The energy savings curves will be provided with the M&V report for program years 2022 through 2024, if the Program is approved by the Commission.

Incremental Costs

Incremental cost is the cost of the energy efficient measure minus the cost of the baseline measure. The base costs and incremental costs for the plug loads and appliances were based on the market costs of currently available⁶⁵ standard and ENERGYSTAR equipment for each plug load or appliance measure.

Base costs and incremental costs for this program design are based on a market survey of distributors providing AC systems. For the Residential AC component, there are two increment cost scenarios for replacements and one for tune-ups: (1) replacement on burnout incremental cost is equal to the full cost of the higher-efficiency system minus the full cost of a new base-efficiency system; (2) early replacement incremental cost is equal to the full cost of the new higher-efficiency system; and (3) the cost of an HVAC low-income tune-up derived from industry survey data minus the average cost of incentives paid during the program year.

For the Residential Pool Pump component, the two incremental cost scenarios for replaces are: (1) replacement on burnout incremental cost is equal to the full cost of the new variable speed pump minus the full cost of a replacement single speed pump or replacement of single speed pump motor or (2) early replacement incremental cost is equal to the full cost of the new variable speed pump minus the incentive offered by the Program

⁶⁵ As of March 2021.

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Residential Equipment and Plug Load Program Data Sheet

Incentives/Rebates

Plug load and appliance rebates will go directly to the customer with proof of purchase. Incentives range from \$4 to \$170 depending on the measure and tier (standard or low-income qualified). Depending upon the program design resulting from a request for proposal for the Residential AC component, the incentives have ranged from \$275 to \$1,600 in the current program, depending upon the cooling and heating capacity of the AC unit, efficiency and if the Residential AC component has in upstream, midstream or downstream design. For the Residential Pool Pump component, a two-tier plan will offer increased incentives to income-qualified customers for replacement of single speed pumps. The Program includes both incentives and rebates to encourage customers and pool partners to participate. The standard replacement incentive is \$220 per unit. The incentive for low-income households is \$450 per unit. The incentive is provided as a pass through to customers and the discount is shown on the customer invoice. Payment is provided directly to customers who select the Do-it-Yourself purchase and installation option following the calibration of the pool pump by an authorized pool calibrator.

Measure Life

For plug loads and appliances, the weighted average EUL (based on expected number of units) for this Program is 10.7 years for 2022, 10.8 years for 2023, and 10.8 years for 2024 for Nevada Power. The weighted average EUL for this program is 11.7 years for 2022 through 2024 at Sierra. EULs were based primarily on values from the 2021 Pennsylvania Technical Reference Manual and supplemented by secondary sources, including NV Energy's current programs' EULs.

Measure Units

A unit for the purposes of this Program is an installed measure.

Savings

The per unit savings for this Program are based primarily on values from the 2021 Pennsylvania Technical Reference Manual and supplemented by secondary sources, including current programs annual energy savings. They range from 6 kWh to 501 kWh depending on the measure. The per unit savings for the Residential AC component are based primarily on values from the 2021 Pennsylvania Technical Reference Manual and supplemented by secondary sources, including current programs annual energy savings. They range from 123 kWh to 3,329 kWh depending on the type of measure and size of home for the Residential AC program. In 2020, verified energy savings from replacement of single-speed pumps with variable speed pumps was 2,756 kWh per unit for Nevada Power. In 2021, 2,756 kWh per unit savings resulted from a combination of variable speed pump installations and retro-calibrations of already installed variable speed pumps. Similar savings are expected for 2022 through 2024.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Residential Equipment and Plug Load Program Data Sheet**

Financial Analysis

Financial assumptions are provided in Section 4 of the DSM plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program has a projected cost effectiveness NTRC ratio of 0.75 for 2022, 0.77 for 2023, and 0.79 for 2024 for Nevada Power and for Sierra 0.26 for 2022, 0.29 for 2023, and 0.31 for 2024.

Nevada Power Input and Output Sheets

Nevada Power - Residential Equipment and Plug Loads

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Incentive per Unit | Income Qualified Units | Standard Units | Income Qualified Rebates per Unit | Standard Rebates/Unit | Low Income Rebates | Standard Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|--|------------------------------|---------------------|----------------------|-------------|-----------|-----------------|--------------------|------------------------|----------------|-----------------------------------|-----------------------|--------------------|------------------|-----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$5,899,999 | \$98,712 | \$1,065,666 | \$2,280,435 | \$398,187 | | | | | | | | | | | | | |
| ENERGY STAR Refrigerator | | | | | | 1,420 | | 237 | 1,183 | \$89 | \$75 | \$21,098 | 88,725 | 404 | 574,309 | 14.0 | \$119 | 58.0% |
| ENERGY STAR Freezer | | | | | | 68 | | 11 | 57 | \$9 | \$5 | \$99 | 285 | 31 | 2,141 | 11.0 | \$9 | 82.0% |
| ENERGY STAR Clothes Washer | | | | | | 114 | | 19 | 95 | \$96 | \$75 | \$1,824 | 7,125 | 20 | 2,336 | 11.0 | \$128 | 58.0% |
| ENERGY STAR Clothes Dryer | | | | | | 568 | | 95 | 473 | \$170 | \$75 | \$16,150 | 35,475 | 232 | 132,054 | 14.0 | \$226 | 58.0% |
| ENERGY STAR Air Purifier | | | | | | 994 | | 318 | 676 | \$60 | \$50 | \$19,080 | 33,800 | 683 | 679,389 | 9.0 | \$80 | 78.0% |
| ENERGY STAR Printer (Ink Jet) | | | | | | | | 87 | 431 | \$17 | \$5 | \$1,479 | 2,155 | 6 | 3,362 | 5.0 | \$23 | 58.0% |
| ENERGY STAR Room Air Conditioner | | | | | | 611 | | 101 | 510 | \$17 | \$10 | \$1,717 | 5,100 | 10 | 6,409 | 9.0 | \$22 | 72.0% |
| Low Flow Faucet Aerator | | | | | | 0 | | | | | | | - | 24 | 0 | 10.0 | \$6 | 100.0% |
| Low Flow Showerhead | | | | | | 0 | | | | | | | | 39 | 0 | 9.0 | \$15 | 100.0% |
| Income Qualified AC Replacements | | | | | | 113 | \$1,102 | | | | | | | 1,537 | 173,186 | 12.1 | \$1,089 | 100.0% |
| Retrofit | | | | | | 2,253 | \$551 | | | | | | | 1,537 | 3,463,722 | 12.1 | \$1,089 | 72.0% |
| Tune Ups | | | | | | 3,111 | \$212 | | | | | | | 181 | 563,091 | 5.0 | \$125 | 93.0% |
| Low Income Variable Speed Pump | | | | | | 194 | | 194 | - | \$450 | | \$87,300 | \$ - | 2,666 | 517,204 | 10.0 | \$388 | 100.0% |
| Variable Speed Pump (contractor installed) | | | | | | 774 | \$245 | | | | | | | 2,666 | 2,063,484 | 10.0 | \$388 | 70.0% |
| Variable Speed Pump (DIY) | | | | | | 340 | | | | | \$220 | | \$76,780 | 2,666 | 930,434 | 10.0 | \$388 | 70.0% |
| Retrocommission | | | | | | 353 | \$100 | | | | | | | 1,385 | 488,878 | 10.0 | \$0 | 100.0% |
| Total: | | | | | | 11,440 | \$197 | 1,062 | 3,425 | | | \$148,742 | \$249,445 | 839 | 9,600,000 | 10.7 | \$363 | 75.4% |

Nevada Power - Residential Equipment and Plug Loads

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Incentive per Unit | Income Qualified Units | Standard Units | Income Qualified Rebates per Unit | Standard Rebates/Unit | Low Income Rebates | Standard Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|--|------------------------------|---------------------|----------------------|-------------|-----------|-----------------|--------------------|------------------------|----------------|-----------------------------------|-----------------------|--------------------|------------------|-----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$5,799,999 | \$1,008,934 | \$2,058,880 | \$2,250,435 | \$481,751 | | | | | | | | | | | | | |
| ENERGY STAR Refrigerator | | | | | | 1,924 | | 322 | 1,602 | \$89 | \$75 | \$28,658 | \$120,150 | 404 | 777,296 | 14.0 | \$119 | 58.0% |
| ENERGY STAR Freezer | | | | | | 92 | | 15 | 77 | \$9 | \$5 | \$133 | \$385 | 31 | 2,853 | 11.0 | \$9 | 82.0% |
| ENERGY STAR Clothes Washer | | | | | | 153 | | 25 | 128 | \$96 | \$75 | \$2,400 | \$8,600 | 20 | 3,060 | 11.0 | \$128 | 58.0% |
| ENERGY STAR Clothes Dryer | | | | | | 749 | | 128 | 641 | \$170 | \$75 | \$21,760 | \$48,075 | 232 | 178,408 | 14.0 | \$226 | 58.0% |
| ENERGY STAR Air Purifier | | | | | | 1,347 | | 431 | 915 | \$60 | \$50 | \$25,860 | \$45,800 | 683 | 920,001 | 9.0 | \$80 | 78.0% |
| ENERGY STAR Printer (Ink Jet) | | | | | | 699 | | 117 | 582 | \$17 | \$5 | \$1,989 | \$2,910 | 6 | 4,194 | 5.0 | \$23 | 58.0% |
| ENERGY STAR Room Air Conditioner | | | | | | 829 | | 138 | 691 | \$17 | \$10 | \$2,346 | \$4,910 | 10 | 8,290 | 9.0 | \$22 | 72.0% |
| Low Flow Faucet Aerator | | | | | | 54 | | 9 | 45 | \$5 | \$4 | \$45 | \$180 | 24 | 1,296 | 10.0 | \$6 | 100.0% |
| Low Flow Showerhead | | | | | | 78 | | 13 | 65 | \$11 | \$5 | \$143 | \$325 | 39 | 4,602 | 9.0 | \$15 | 100.0% |
| Income Qualified AC Replacements | | | | | | 113 | \$1,102 | | | | | | | 1,537 | 173,186 | 12.1 | \$1,089 | 100.0% |
| Retrofit | | | | | | 2,253 | \$551 | | | | | | | 1,537 | 3,463,722 | 12.1 | \$1,089 | 72.0% |
| Tune Ups | | | | | | 3,111 | \$212 | | | | | | | 181 | 563,091 | 5.0 | \$125 | 93.0% |
| Low Income Variable Speed Pump | | | | | | 194 | | 194 | - | \$450 | | \$87,300 | | 2,666 | 517,204 | 10.0 | \$388 | 100.0% |
| Variable Speed Pump (contractor installed) | | | | | | 774 | \$245 | | | | | | | 2,666 | 2,063,484 | 10.0 | \$388 | 70.0% |
| Variable Speed Pump (DIY) | | | | | | 340 | | | | | \$220 | | \$76,780 | 2,666 | 930,434 | 10.0 | \$388 | 70.0% |
| Retrocommission | | | | | | 353 | \$100 | | | | | | | 1,385 | 488,878 | 10.0 | \$0 | 100.0% |
| Total: | | | | | | 13,092 | \$172 | 1,392 | 4,747 | | | \$170,636 | \$311,115 | 771 | 10,100,000 | 10.8 | \$329 | 76.1% |

Nevada Power - Residential Equipment and Plug Loads

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Incentive per Unit | Income Qualified Units | Standard Units | Income Qualified Rebates per Unit | Standard Rebates/Unit | Low Income Rebates | Standard Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|--|------------------------------|---------------------|----------------------|-------------|-----------|-----------------|--------------------|------------------------|----------------|-----------------------------------|-----------------------|--------------------|------------------|-----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$5,899,999 | \$1,005,447 | \$2,112,971 | \$2,250,435 | \$531,147 | | | | | | | | | | | | | |
| ENERGY STAR Refrigerator | | | | | | 2,230 | | 412 | 1,818 | \$89 | \$75 | \$36,698 | 136,350 | 404 | 900,920 | 14.0 | \$119 | 58.0% |
| ENERGY STAR Freezer | | | | | | 92 | | 15 | 77 | \$9 | \$5 | \$135 | 385 | 31 | 2,852 | 11.0 | \$9 | 82.0% |
| ENERGY STAR Clothes Washer | | | | | | 178 | | 35 | 143 | \$96 | \$75 | \$3,360 | 10,725 | 20 | 3,560 | 11.0 | \$128 | 58.0% |
| ENERGY STAR Clothes Dryer | | | | | | 890 | | 158 | 732 | \$170 | \$75 | \$26,860 | 54,900 | 232 | 206,480 | 14.0 | \$226 | 58.0% |
| ENERGY STAR Air Purifier | | | | | | 1,562 | | 511 | 1,051 | \$60 | \$50 | \$30,660 | 52,550 | 683 | 1,066,846 | 9.0 | \$80 | 78.0% |
| ENERGY STAR Printer (Ink Jet) | | | | | | 701 | | 91 | 610 | \$17 | \$5 | \$1,547 | 3,050 | 6 | 4,206 | 5.0 | \$23 | 58.0% |
| ENERGY STAR Room Air Conditioner | | | | | | 829 | | 109 | 720 | \$17 | \$10 | \$1,833 | 7,200 | 10 | 8,290 | 9.0 | \$22 | 72.0% |
| Low Flow Faucet Aerator | | | | | | 54 | | 10 | 54 | \$5 | \$4 | \$50 | 215 | 24 | 1,536 | 10.0 | \$6 | 100.0% |
| Low Flow Showerhead | | | | | | 90 | | 18 | 72 | \$11 | \$5 | \$158 | 360 | 39 | 5,310 | 9.0 | \$15 | 100.0% |
| Income Qualified AC Replacements | | | | | | 113 | \$1,102 | | | | | | | 1,537 | 173,186 | 12.1 | \$1,089 | 100.0% |
| Retrofit | | | | | | 2,253 | \$551 | | | | | | | 1,537 | 3,463,722 | 12.1 | \$1,089 | 72.0% |
| Tune Ups | | | | | | 3,111 | \$212 | | | | | | | 181 | 563,091 | 5.0 | \$125 | 93.0% |
| Low Income Variable Speed Pump | | | | | | 194 | | 194 | - | \$450 | | \$87,300 | | 2,666 | 517,204 | 10.0 | \$388 | 100.0% |
| Variable Speed Pump (contractor installed) | | | | | | 774 | \$245 | | | | | | | 2,666 | 2,063,484 | 10.0 | \$388 | 70.0% |
| Variable Speed Pump (DIY) | | | | | | 340 | | | | | \$220 | | \$76,780 | 2,666 | 930,434 | 10.0 | \$388 | 70.0% |
| Retrocommission | | | | | | 353 | \$100 | | | | | | | 1,385 | 488,878 | 10.0 | \$0 | 100.0% |
| Total: | | | | | | 13,783 | \$161 | 1,553 | 5,277 | | | \$188,631 | \$342,516 | 766 | 10,399,999 | 10.8 | \$319 | 74.9% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential Equipment and Plug Load Program Data Sheet

| | | | |
|-------------------------|---|------------------------------|-----------------------------------|
| Name: | 2022 Residential Equipment and Plug Loads | Last Updated: | 5/25/2021 20:04 |
| Customer Sector: | Residential | Avg Measure Life: | 10.57 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|---------------------------|--------------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$6,299,403 | \$8,399,160 | (\$2,099,758) | 0.75 | \$0.144 |
| Total Resource Cost (TRC) | \$5,477,742 | \$8,399,160 | (\$2,921,419) | 0.65 | \$0.144 |
| Utility Cost Test (UCT) | \$5,477,742 | \$5,600,010 | (\$122,268) | 0.98 | \$0.096 |
| Participant Cost Test (PCT) | \$10,115,485 | \$4,157,445 | \$5,958,040 | 2.43 | \$0.053 |
| Ratepayer Impact (RIM) | \$5,477,742 | \$11,171,082 | (\$5,693,340) | 0.49 | \$0.191 |
| Societal Cost (SCT) | \$6,489,348 | \$8,399,160 | (\$1,909,813) | 0.77 | \$0.144 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$5,600,010 | \$0 | \$0 | \$5,600,010 | |
| Electric Benefits (\$) | \$642,933 | \$0 | \$0 | \$5,477,742 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 7,604,913 | 0 | 0 | 80,415,576 | |
| Critical Peak Hour Demand (kW) | 3,383 | 0 | 0 | 3,383 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 1,732,095 | 0 | 0 | 18,481,561 | |
| Total On Peak Hours (%) | | | | 22.98% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | <u>Secondary Benefits</u> | | | | |
| Discount Rate: | 7.14% | Other Savings | | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 4.77% | <u>Scenarios:</u> | | | |
| Line Loss (Demand): | 9.93% | Measure Life | | | |
| Avoided T&D Capacity \$/MW: | \$52,165 | Energy Savings | | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Energy Cost | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Avoided Capacity Cost | | | |
| Electric Retail Rate (\$/KWh): | \$0.10 | Incremental Measure Cost | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 74.6% | | | | |

| | | | |
|-------------------------|---|------------------------------|-----------------------------------|
| Name: | 2023 Residential Equipment and Plug Loads | Last Updated: | 5/25/2021 20:11 |
| Customer Sector: | Residential | Avg Measure Life: | 10.60 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|---------------------------|--------------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$6,632,146 | \$8,639,862 | (\$2,007,716) | 0.77 | \$0.141 |
| Total Resource Cost (TRC) | \$5,767,084 | \$8,639,862 | (\$2,872,778) | 0.67 | \$0.141 |
| Utility Cost Test (UCT) | \$5,767,084 | \$5,799,998 | (\$32,914) | 0.99 | \$0.095 |
| Participant Cost Test (PCT) | \$10,604,655 | \$4,306,748 | \$6,297,908 | 2.46 | \$0.052 |
| Ratepayer Impact (RIM) | \$5,767,084 | \$11,641,789 | (\$5,874,705) | 0.50 | \$0.190 |
| Societal Cost (SCT) | \$6,835,342 | \$8,639,862 | (\$1,804,520) | 0.79 | \$0.141 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$5,799,998 | \$0 | \$0 | \$5,799,998 | |
| Electric Benefits (\$) | \$664,316 | \$0 | \$0 | \$5,767,084 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 7,963,044 | 0 | 0 | 84,399,540 | |
| Critical Peak Hour Demand (kW) | 3,428 | 0 | 0 | 3,428 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 1,763,711 | 0 | 0 | 18,836,353 | |
| Total On Peak Hours (%) | | | | 22.32% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | <u>Secondary Benefits</u> | | | | |
| Discount Rate: | 7.14% | Other Savings | | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | | | |
| Line Loss (Energy): | 4.77% | Measure Life | | | |
| Line Loss (Demand): | 9.93% | Energy Savings | | | |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | | | |
| Electric Retail Rate (\$/KWh): | \$0.10 | | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 74.2% | | | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential Equipment and Plug Load Program Data Sheet

| | | | |
|-------------------------|---|------------------------------|-------------------------------|
| Name: | 2024 Residential Equipment and Plug Loads | Last Updated: | 5/25/2021 20:19 |
| Customer Sector: | Residential | Avg Measure Life: | 10.61 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | Program DB Name: PD_Vegas_2024PY_April2021_AY.xlsx | | |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$6,928,245 | \$8,761,402 | (\$1,833,157) | 0.79 | \$0.139 |
| Total Resource Cost (TRC) | \$6,024,561 | \$8,761,402 | (\$2,736,841) | 0.69 | \$0.139 |
| Utility Cost Test (UCT) | \$6,024,561 | \$5,900,012 | \$124,550 | 1.02 | \$0.094 |
| Participant Cost Test (PCT) | \$10,897,988 | \$4,391,194 | \$6,506,794 | 2.48 | \$0.052 |
| Ratepayer Impact (RIM) | \$6,024,561 | \$11,903,938 | (\$5,879,377) | 0.51 | \$0.189 |
| Societal Cost (SCT) | \$7,141,986 | \$8,761,402 | (\$1,619,415) | 0.82 | \$0.139 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$5,900,012 | \$0 | \$0 | \$5,900,012 |
| Electric Benefits (\$) | \$620,046 | \$0 | \$0 | \$6,024,561 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 8,177,027 | 0 | 0 | 86,788,185 |
| Critical Peak Hour Demand (kW) | 3,454 | 0 | 0 | 3,454 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,782,470 | 0 | 0 | 19,047,942 |
| Total On Peak Hours (%) | | | | 21.95% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 74.0% | | |

Sierra Input and Output Sheets

| Sierra - Residential Equipment and Plug Loads | | | | | | | | | | | | | | | | | | | |
|---|------------------------------------|---------------------------|-------------------------|------------|----------|--------------------|-----------------------|---------------------|------------------------------|-------------------|--|-------------------------|--------------------------|---------------------|-------------------------------------|-------------------------------------|-----------------------------|--|------------------|
| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Incentive per Unit | Total Incentives | Income Qualified Units | Standard Units | Income Qualified Rebates per Unit | Standard Rebate/Unit | Low Income Rebates | Standard Rebates | Annual Savings (kWh/ unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to- Gross |
| Measures: | \$800,000 | \$117,756 | \$341,386 | \$287,390 | \$83,468 | | | | | | | | | | | | | | |
| ENERGY STAR Refrigerator | | | | | | 508 | | | 94 | 424 | \$89 | \$75 | \$7,476 | 31,800 | 404 | 205,252 | 14.0 | \$119 | 58.0% |
| ENERGY STAR Freezer | | | | | | 27 | | | 6 | 21 | \$9 | \$5 | \$54 | 105 | 31 | 838 | 11.0 | \$9 | 82.0% |
| ENERGY STAR Clothes Washer | | | | | | 41 | | | 7 | 34 | \$96 | \$75 | \$672 | 2,550 | 20 | 820 | 11.0 | \$128 | 58.0% |
| ENERGY STAR Clothes Dryer | | | | | | 201 | | | 32 | 169 | \$170 | \$75 | \$5,440 | 12,675 | 232 | 46,692 | 14.0 | \$226 | 58.0% |
| Purifier | | | | | | 356 | | | 114 | 242 | \$60 | \$50 | \$6,840 | 12,100 | 683 | 243,148 | 9.0 | \$80 | 78.0% |
| ENERGY STAR Printer (ink jet) | | | | | | 185 | | | 31 | 154 | \$17 | \$5 | \$527 | 770 | 6 | 1,110 | 5.0 | \$23 | 58.0% |
| ENERGY STAR Room Air Conditioner | | | | | | 220 | | | 37 | 183 | \$17 | \$10 | \$629 | 1,830 | 10 | 2,200 | 9.0 | \$21 | 72.0% |
| Low Flow Faucet Aerator | | | | | | 0 | | | | | | | | 24 | 0 | 0 | 10.0 | \$6 | 100.0% |
| Low Flow Showerhead | | | | | | 0 | | | | | | | | 59 | 0 | 0 | 9.0 | \$15 | 100.0% |
| Income Qualified AC Replacements | | | | | | 86 | \$244 | \$20,908 | | | | | | | 481 | 41,282 | 12.1 | \$1,089 | 100.0% |
| Retrofit | | | | | | 1,716 | \$122 | \$209,076 | | | | | | | 481 | \$25,643 | 12.1 | \$1,089 | 72.0% |
| Tune Ups | | | | | | 584 | \$47 | \$27,407 | | | | | | | 57 | 33,075 | 5.0 | \$125 | 93.0% |
| Total: | | | | | | 3,923 | \$66 | \$287,390 | 311 | | | | \$21,638 | \$61,830 | 387 | 1,400,000 | 11.7 | \$587 | 71.8% |

| Sierra - Residential Equipment and Plug Loads | | | | | | | | | | | | | | | | | | | |
|---|------------------------------------|---------------------------|-------------------------|------------|-----------|--------------------|-----------------------|---------------------|------------------------------|-------------------|--|-------------------------|--------------------------|---------------------|-------------------------------------|-------------------------------------|-----------------------------|--|------------------|
| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Incentive per Unit | Total Incentives | Income Qualified Units | Standard Units | Income Qualified Rebates per Unit | Standard Rebate/Unit | Low Income Rebates | Standard Rebates | Annual Savings (kWh/ unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to- Gross |
| Measures: | \$880,000 | \$119,852 | \$384,009 | \$287,390 | \$118,750 | | | | | | | | | | | | | | |
| ENERGY STAR Refrigerator | | | | | | 719 | | | 120 | 599 | \$89 | \$75 | \$10,680 | 44,925 | 404 | 290,476 | 14.0 | \$119 | 58.0% |
| ENERGY STAR Freezer | | | | | | 35 | | | 6 | 29 | \$9 | \$5 | \$54 | 145 | 31 | 1,073 | 11.0 | \$9 | 82.0% |
| ENERGY STAR Clothes Washer | | | | | | 57 | | | 9 | 48 | \$96 | \$75 | \$654 | 3,600 | 20 | 1,140 | 11.0 | \$128 | 58.0% |
| ENERGY STAR Clothes Dryer | | | | | | 288 | | | 48 | 240 | \$170 | \$75 | \$8,160 | 18,000 | 232 | 66,816 | 14.0 | \$226 | 58.0% |
| Purifier | | | | | | 503 | | | 161 | 342 | \$60 | \$50 | \$9,660 | 17,100 | 683 | 343,549 | 9.0 | \$80 | 78.0% |
| ENERGY STAR Printer (Ink Jet) | | | | | | 262 | | | 44 | 218 | \$17 | \$5 | \$748 | 1,080 | 6 | 1,572 | 5.0 | \$23 | 58.0% |
| ENERGY STAR Room Air Conditioner | | | | | | 310 | | | 51 | 259 | \$17 | \$10 | \$867 | 2,590 | 10 | 3,100 | 9.0 | \$22 | 72.0% |
| Low Flow Faucet Aerator | | | | | | 21 | | | 3 | 18 | \$5 | \$4 | \$15 | 72 | 24 | 304 | 10.0 | \$6 | 100.0% |
| Low Flow Showerhead | | | | | | 30 | | | 5 | 25 | \$11 | \$5 | \$55 | 125 | 59 | 1,770 | 9.0 | \$15 | 100.0% |
| Income Qualified AC Replacements | | | | | | 86 | \$244 | \$20,908 | | | | | | | 481 | 41,282 | 12.1 | \$1,089 | 100.0% |
| Retrofit | | | | | | 1,716 | \$122 | \$209,076 | | | | | | | 481 | \$25,643 | 12.1 | \$1,089 | 72.0% |
| Tune Ups | | | | | | 584 | \$47 | \$27,407 | | | | | | | 57 | 33,075 | 5.0 | \$125 | 93.0% |
| Total: | | | | | | 4,610 | \$66 | \$287,390 | | | | | \$31,103 | \$87,647 | 349 | 1,610,000 | 11.7 | \$487 | 71.3% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential Equipment and Plug Load Program Data Sheet

Sierra - Residential Equipment and Plug Loads

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Incentive per Unit | Total Incentives | Income Qualified Units | Standard Units | Income Qualified Rebate per Unit | Standard Rebate/Unit | Low Income Rebates | Standard Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to- Gross |
|----------------------------------|------------------------------------|---------------------------|-------------------------|------------|-----------|--------------------|-----------------------|---------------------|------------------------------|-------------------|---|-------------------------|--------------------------|---------------------|--------------------------------------|-------------------------------------|-----------------------------|--|------------------|
| Measure: | \$830,000 | \$121,569 | \$410,701 | \$287,360 | \$140,340 | | | | | | | | | | | | | | |
| ENERGY STAR Refrigerator | | | | | | 850 | | | 141 | 708 | \$89 | \$75 | \$12,549 | 53,175 | 404 | 349,400 | 14.0 | \$119 | 58.0% |
| ENERGY STAR Freezer | | | | | | 41 | | | 7 | 34 | \$9 | \$5 | \$63 | 170 | 31 | 1,271 | 11.0 | \$9 | 82.0% |
| ENERGY STAR Clothes Washer | | | | | | 67 | | | 11 | 56 | \$96 | \$75 | \$1,056 | 4,200 | 20 | 1,340 | 11.0 | \$128 | 58.0% |
| ENERGY STAR Clothes Dryer | | | | | | 339 | | | 57 | 282 | \$170 | \$75 | \$9,690 | 21,150 | 232 | 78,648 | 14.0 | \$226 | 58.0% |
| Purifier | | | | | | 595 | | | 191 | 405 | \$80 | \$50 | \$11,450 | 20,250 | 683 | 407,068 | 9.0 | \$80 | 78.0% |
| ENERGY STAR Printer (Ink Jet) | | | | | | 309 | | | 52 | 257 | \$17 | \$5 | \$884 | 1,285 | 6 | 1,854 | 5.0 | \$23 | 58.0% |
| ENERGY STAR Room Air Conditioner | | | | | | 365 | | | 61 | 305 | \$17 | \$10 | \$1,037 | 3,050 | 10 | 3,660 | 9.0 | \$22 | 72.0% |
| Low Flow Faucet Aerator | | | | | | 24 | | | 4 | 20 | \$5 | \$4 | \$20 | 80 | 24 | 576 | 10.0 | \$6 | 100.0% |
| Low Flow Showerhead | | | | | | 37 | | | 6 | 31 | \$11 | \$5 | \$66 | 155 | 59 | 2,183 | 9.0 | \$15 | 100.0% |
| Income Qualified AC Replacements | | | | | | 85 | \$244 | \$20,908 | | | | | | | 481 | 41,282 | 12.1 | \$1,089 | 100.0% |
| Retrofit | | | | | | 1,715 | \$122 | \$209,076 | | | | | | | 481 | 825,643 | 12.1 | \$1,089 | 72.0% |
| Tune Ups | | | | | | 384 | \$47 | \$27,407 | | | | | | | 37 | 33,075 | 5.0 | \$125 | 93.0% |
| Total: | | | | | | 5,014 | \$81 | \$287,390 | 630 | | | | \$36,825 | \$103,515 | 347 | 1,740,000 | 11.7 | \$486 | 71.1% |

| | | | |
|---|---|------------------------------|----------------------------------|
| Name: | 2022 Residential Equipment and Plug Loads | Last Updated: | 5/25/2021 19:08 |
| Customer Sector: | Residential | Avg Measure Life: | 11.58 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AV.xlsm |
| End Year: | 2022 | CAD File Name: | Reno_CAD_April2021_AV.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PV_April2021_AV.xlsx |
| Stakeholder Perspectives & Tests | | | |
| | Benefits (PV) | Costs (PV) | Net Benefits (PV) |
| NEB Total Resource Cost (NTRC) | \$606,241 | \$2,346,843 | (\$1,740,602) |
| Total Resource Cost (TRC) | \$527,166 | \$2,346,843 | (\$1,819,677) |
| Utility Cost Test (UCT) | \$527,166 | \$800,002 | (\$272,836) |
| Participant Cost Test (PCT) | \$1,282,985 | \$2,183,837 | (\$900,852) |
| Ratepayer Impact (RIM) | \$527,166 | \$1,470,174 | (\$943,008) |
| Societal Cost (SCT) | \$635,924 | \$2,346,843 | (\$1,710,920) |
| <i>*Includes rebates paid to freeriders</i> | | | |
| Utility Savings & Costs* | 2022 | 2023 | 2024 |
| Total Utility Investment (\$) | \$800,002 | \$0 | \$0 |
| Electric Benefits (\$) | \$53,893 | \$0 | \$0 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | |
| Electric Savings (kWh) | 1,073,259 | 0 | 0 |
| Critical Peak Hour Demand (kW) | 212 | 0 | 0 |
| Gas Savings (therms) | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 50,389 | 0 | 0 |
| Total On Peak Hours (%) | | | |
| | | | 16.53% |
| <i>*Savings in this section are adjusted for line loss and net-to-gross</i> | | | |
| Financial Data | | Secondary Benefits | |
| Discount Rate: | 6.75% | Other Savings | |
| Rate Escalator: | 0.00% | \$0 | |
| Inflation Rate (T&D): | 2.00% | | |
| Line Loss (Energy): | 6.30% | | |
| Line Loss (Demand): | 14.31% | | |
| Avoided T&D Capacity \$/MW: | \$46,748 | | |
| Environmental Adder (SCT only) | 10.00% | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | | |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 71.1% | | |
| | | Scenarios: | |
| | | Measure Life | |
| | | Energy Savings | |
| | | Avoided Energy Cost | |
| | | Avoided Capacity Cost | |
| | | Incremental Measure Cost | |
| | | 100% | |
| | | 100% | |
| | | 100% | |
| | | 100% | |

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| | | | |
|-------------------------|---|------------------------------|----------------------------------|
| Name: | 2023 Residential Equipment and Plug Loads | Last Updated: | 5/25/2021 19:16 |
| Customer Sector: | Residential | Avg Measure Life: | 11.53 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|--|---------------------------|--------------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$699,489 | \$2,443,970 | (\$1,744,481) | 0.29 | \$0.240 |
| Total Resource Cost (TRC) | \$608,251 | \$2,443,970 | (\$1,835,719) | 0.25 | \$0.240 |
| Utility Cost Test (UCT) | \$608,251 | \$880,003 | (\$271,751) | 0.69 | \$0.087 |
| Participant Cost Test (PCT) | \$1,456,979 | \$2,246,815 | (\$789,836) | 0.65 | \$0.156 |
| Ratepayer Impact (RIM) | \$608,251 | \$1,642,574 | (\$1,034,322) | 0.37 | \$0.161 |
| Societal Cost (SCT) | \$734,294 | \$2,443,970 | (\$1,709,676) | 0.30 | \$0.240 |
| *Includes rebates paid to freeriders | | | | | |
| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project | |
| Total Utility Investment (\$) | \$880,003 | \$0 | \$0 | \$880,003 | |
| Electric Benefits (\$) | \$60,343 | \$0 | \$0 | \$608,251 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 1,225,892 | 0 | 0 | 14,130,613 | |
| Critical Peak Hour Demand (kW) | 233 | 0 | 0 | 233 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 56,457 | 0 | 0 | 2,355,542 | |
| Total On Peak Hours (%) | | | | 16.67% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| Financial Data | Secondary Benefits | | | | |
| Discount Rate: | 6.75% | Other Savings | | | |
| Rate Escalator: | 0.00% | \$0 | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 6.30% | Scenarios: | | | |
| Line Loss (Demand): | 14.31% | Measure Life | | | |
| Avoided T&D Capacity \$/MW: | \$46,748 | Energy Savings | | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Energy Cost | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Avoided Capacity Cost | | | |
| Electric Retail Rate (\$/KWh): | \$0.08 | Incremental Measure Cost | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | 100% | | | |
| Net-To-Gross Ratio | 70.6% | 100% | | | |

| | | | |
|-------------------------|---|------------------------------|----------------------------------|
| Name: | 2024 Residential Equipment and Plug Loads | Last Updated: | 5/25/2021 19:25 |
| Customer Sector: | Residential | Avg Measure Life: | 11.50 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|--|---------------------------|--------------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$772,103 | \$2,504,289 | (\$1,732,187) | 0.31 | \$0.229 |
| Total Resource Cost (TRC) | \$671,394 | \$2,504,289 | (\$1,832,896) | 0.27 | \$0.229 |
| Utility Cost Test (UCT) | \$671,394 | \$929,995 | (\$258,601) | 0.72 | \$0.085 |
| Participant Cost Test (PCT) | \$1,564,329 | \$2,285,140 | (\$720,811) | 0.68 | \$0.147 |
| Ratepayer Impact (RIM) | \$671,394 | \$1,749,646 | (\$1,078,252) | 0.38 | \$0.160 |
| Societal Cost (SCT) | \$810,904 | \$2,504,289 | (\$1,693,386) | 0.32 | \$0.229 |
| *Includes rebates paid to freeriders | | | | | |
| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project | |
| Total Utility Investment (\$) | \$929,995 | \$0 | \$0 | \$929,995 | |
| Electric Benefits (\$) | \$59,622 | \$0 | \$0 | \$671,394 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 1,320,272 | 0 | 0 | 15,180,421 | |
| Critical Peak Hour Demand (kW) | 246 | 0 | 0 | 246 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 60,215 | 0 | 0 | 2,540,459 | |
| Total On Peak Hours (%) | | | | 16.74% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| Financial Data | Secondary Benefits | | | | |
| Discount Rate: | 6.75% | Other Savings | | | |
| Rate Escalator: | 0.00% | \$0 | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 6.30% | Scenarios: | | | |
| Line Loss (Demand): | 14.31% | Measure Life | | | |
| Avoided T&D Capacity \$/MW: | \$46,748 | Energy Savings | | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Energy Cost | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Avoided Capacity Cost | | | |
| Electric Retail Rate (\$/KWh): | \$0.08 | Incremental Measure Cost | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | 100% | | | |
| Net-To-Gross Ratio | 70.3% | 100% | | | |

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2022-2024 Residential Codes and New Construction Program

Description

The Residential Codes and New Construction Program (“Program”) provides support to the residential new construction market to increase the energy efficiency of Nevada homes. Residential customers benefit through lower energy bills, increased comfort, fewer maintenance concerns, and higher resale values.

The Program will have two separate but complementary components, New Construction and Residential Codes. For the New Construction component, builders of single-family and multi-family homes with four units or less will receive education, technical assistance, and incentives to exceed local building energy codes. A rating must be completed on each home by a residential energy services network certified Home Energy Rating System (“HERs”) rater. To qualify for a rebate, homes must achieve a HERs Index Score 10 points lower than that required by local building codes. As jurisdictions adopt newer codes, the minimum qualifying HERs scores would be updated. Energy savings are determined for each home based on the difference between the energy used by a home that just meets local code and the as-built new home. The program will utilize an implementation contractor who will work with builders, HERs raters, and other market actors to enroll homes in the Program, conduct HERs ratings, determine incentive eligibility, calculate savings, and provide robust quality assurance and control.

The Residential Codes component, administered in close collaboration with other entities, will provide on-site topical trainings and a circuit rider, with a focus on specific areas of code with low compliance. Circuit riders are individuals that cover the service territory, visiting industry stakeholders such as individual jurisdictions, architect/engineering offices, and building associations providing real-time targeted guidance and support while sharing best practices. Circuit riders can also serve with technical assistance and provide a “hotline,” responding to phone or email Residential Codes compliance- or adoption-related questions. Circuit riders earn the trust of the building community and become embedded in the code compliance and adoption process.

The Residential Codes component are different than traditional energy efficiency programs in that there are no “participants.” Program staff do not work directly with end use customers or individual buildings. Instead, activities support code officials and builders/designers to shift the entire market. As such, savings are based on the volume of New Construction in the entire service territory. The savings estimation methodology is based on established protocols such as the California evaluation framework and industry best practices. These methodologies rely on compliance studies to determine baseline compliance before the Program start and influence on the market. A compliance study was just completed by the DOE for Nevada and is used by the Program as the baseline compliance for savings estimation.⁶⁶ The Program should consider conducting a second compliance study in 2024 to assess the influence after the first two years of the Program.

⁶⁶ There is not a report published yet. The following link to the DOE site contains more information:
https://energy.nv.gov/Programs/Energy_Code_Field_Study/

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Combining the New Construction and Residential Codes components allows NV Energy the ability to address builders that need support in complying with residential code and encourage builders to look beyond code. It establishes a framework for future beyond code work as NV Energy explores stretch Residential Codes. It is also an effective way to engage with the residential New Construction ecosystem. The Program can leverage resources and create a synergistic relationship where the Residential Codes work can provide the New Construction component early information about upcoming changes in codes and their associated baseline shifts. This allows the New Construction component to stay ahead of the market by incorporating continuous process improvement into the Program's design.

2020 Results and 2021 Plan

This is a new program for the 2022 through 2024 action plan period and was not run in 2020 or 2021.

2022-2024 Proposed Plans

The proposed budget, projected demand and energy savings, and participant goals for the Program for the 2022 through 2024 program years are provided in Table DSM-44 below.

Table DSM-44: 2022-2024 Residential Codes and New Construction Proposed Budgets, Savings Targets, and Participant Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--|--------------------|-----------------------------------|------------------------------------|------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Residential Codes and New Construction | \$420,000 | 160 | 596,000 | 590 |
| Sierra | | | | |
| Residential Codes and New Construction | \$280,000 | 100 | 400,000 | 398 |
| NV Energy | \$700,000 | 260 | 996,000 | 988 |
| 2023 | | | | |
| Nevada Power | | | | |
| Residential Codes and New Construction | \$1,100,000 | 440 | 1,640,000 | 14,288 |
| Sierra | | | | |
| Residential Codes and New Construction | \$720,000 | 351 | 1,400,000 | 4,472 |
| NV Energy | \$1,820,000 | 791 | 3,040,000 | 18,760 |
| 2024 | | | | |
| Nevada Power | | | | |
| Residential Codes and New Construction | \$1,560,000 | 1,126 | 4,200,000 | 15,602 |
| Sierra | | | | |
| Residential Codes and New Construction | \$1,040,000 | 876 | 3,500,000 | 5,184 |
| NV Energy | \$2,600,000 | 2,002 | 7,700,000 | 20,786 |

The jurisdictions in Nevada Power's territory adopted the 2018 International Energy Conservation Codes ("IECC") during 2018. As such, compliance with 2018 IECC is relatively high. Local jurisdictions are not expected to adopt 2021 IECC and instead adopt 2024 IECC. Therefore, the

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Residential Codes component portion of the Program will launch in 2023 in preparation for the 2024 IECC adoption.

Initially, the Program will focus on single-family homes and multi-family homes with four units or fewer. Once established, NV Energy will explore the feasibility of expanding the Program to include larger multi-family buildings. As NV Energy does not currently have a whole home New Construction component, only homes permitted after the launch of the Program will be eligible to participate. This was an assumption that was incorporated into the budget and savings estimates. NV Energy will work closely with other programs that service the New Construction market, such as the Residential Pool Pumps and Residential AC components of the Residential Equipment and Plug Loads program, to provide builders the opportunity to participate in the programs that best align with their goals and needs. The Program will also coordinate with the Energy Education Program to streamline builders' training.

Beginning in 2023, the Residential Codes component will provide tools to support local jurisdictions in adopting the state code and for improving energy code compliance. The Program design is based on residential codes programs in 12 other states, tailored to Nevada's market. Technical Appendix DSM-27 provides the *California Codes & Standards Impact Evaluation*.

The Program goals are to increase energy code compliance and support local communities in adopting new codes more frequently. The Program activities are designed to complement the activities of other organizations, like the SWEEP and the GOE, and provide support in areas stakeholders identified as barriers to increased compliance and adoption.

Measurement and Verification

If the Program is approved by the Commission, M&V reports will be provided for program years 2022 through 2024.

Energy Savings Curves

If the Program is approved by the Commission, the energy savings curves will be provided with the M&V report for program years 2022 through 2024.

Incremental Costs

For the New Construction component, the incremental cost is the cost of the as-built home, which must exceed the local building code by a minimum of 10 HERs points minus the cost of a home, which is minimally compliant with the local energy code.

For the Residential Codes component, there is no incremental cost. The definition of incremental cost is the difference in the cost of a base energy efficiency measure compared to the cost of a higher efficiency alternative. It represents the incremental cost that must be paid, by the customer

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or another party, in order to gain the energy savings benefits from the higher efficiency measure.⁶⁷ Once a code is passed, it is the law or base case. Therefore, compliance with code results in no incremental costs.

Incentives/Rebates

The New Construction component of the Program provides a \$500 incentive to builders who construct single-family and multi-family homes with four units or fewer that achieve a HERs Index Score 10 points lower than required by local building codes. As jurisdictions adopt newer codes, the minimum qualifying HERs scores will be updated. Incentive levels are in line with other residential new construction programs nationwide and set at a level to cover enough of the incremental cost to influence decision making.⁶⁸ Within the three-year action plan period, NV Energy will consider a higher-level incentive for homes built in low-income neighborhoods or those that have been historically underserved.

There are no proposed incentives for the Residential Codes component of the Program.

Measure Life

The EUL for both components of the Program is 20 years based on the California Measurement Advisory Agency's ("CALMAC") EUL values.⁶⁹

Measure Units

For the purposes of this Program, a unit for the New Construction component is a participating single-family detached home or one unit within a multi-family building. For the Residential Codes component of the Program, a unit is a single-family or multi-family home built in NV Energy's service territories.

Savings

The savings for the Residential Codes component are based on forecasted construction growth in NV Energy's service territories, an assumed baseline compliance rate, an improved compliance rate, and the influence of NV Energy on the market as compared to other market actors.

The savings for the New Construction component assumed a 10 percent improvement over local code, the average home size of 1,835 square feet, along with an assumption that penetration of new construction homes participating in the Program will annually increase.

⁶⁷ Heschong Mahone Group, Inc., *Incremental Measure Costs in New Construction Programs. White Paper on Best Practices and Regulatory Issues* (January 2009). Available at http://www.calmac.org/publications/hmg_imc_white_paper_v3_final.pdf.

⁶⁸ Please refer to www.ENERGYSTAR.gov: [Nationwide Incentives](#) | [About ENERGY STAR](#) | [ENERGY STAR](#), which provides examples by utility, state and incentive program name for comparison.

⁶⁹ CALMAC, *Effective Useful Life Values for Major Energy Efficiency Measures*. Available at http://www.calmac.org/events/APX_F.pdf.

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Financial Analysis

Financial assumptions are provided in Section 4 of this DSM Plan and are presented in the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section, “Utility Savings & Costs,” provides the annual and lifetime costs and savings from the utility perspective. The Program has a projected cost effectiveness NTRC ratio of 0.89 for 2022, 0.98 for 2023, and 1.8 for 2024 for Nevada Power and for Sierra 1.19 for 2022, 1.66 for 2023, and 2.94 for 2024.

Nevada Power Input and Output Sheets

Nevada Power - Residential Codes and New Construction

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Rebate / Incentive \$ per unit | Total Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|------------------|------------------------------|---------------------|----------------------|------------|-----------|---------------------------------|--------------------------------|------------------|-----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$420,000 | \$27,039 | \$97,961 | \$0 | \$295,000 | | | | | | | | |
| Codes | | | | | | 0 | \$0 | \$0 | 0 | 0 | 20.0 | \$0 | 70.0% |
| New Construction | | | | | | 590 | \$500 | \$295,000 | 1,010 | \$96,000 | 20.0 | \$891 | 70.0% |
| Total | | | | | | 590 | \$500 | \$295,000 | 1,010 | \$96,000 | 20.0 | \$891 | 70.0% |

Nevada Power - Residential Codes and New Construction

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Rebate / Incentive \$ per unit | Total Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|------------------|------------------------------|---------------------|----------------------|------------|-----------|---------------------------------|--------------------------------|------------------|-----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$1,100,000 | \$108,243 | \$286,757 | \$0 | \$705,000 | | | | | | | | |
| Codes | | | | | | 12,878 | \$0 | \$0 | 17 | 215,835 | 20.0 | \$0 | 70.0% |
| New Construction | | | | | | 1,410 | \$500 | \$705,000 | 1,010 | 1,424,165 | 20.0 | \$891 | 70.0% |
| Total | | | | | | 14,288 | \$49 | \$705,000 | 1,010 | 1,640,000 | 20.0 | \$891 | 70.0% |

Nevada Power - Residential Codes and New Construction

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Rebate / Incentive \$ per unit | Total Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|------------------|------------------------------|---------------------|----------------------|------------|-------------|---------------------------------|--------------------------------|--------------------|-----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$1,560,000 | \$131,933 | \$388,067 | \$0 | \$1,040,000 | | | | | | | | |
| Codes | | | | | | 13,522 | \$0 | \$0 | 155 | 2,099,200 | 20.0 | \$0 | 70.0% |
| New Construction | | | | | | 2,080 | \$500 | \$1,040,000 | 1,010 | 2,100,800 | 20.0 | \$891 | 70.0% |
| Total | | | | | | 15,602 | \$67 | \$1,040,000 | 1,010 | 4,200,000 | 20.0 | \$891 | 70.0% |

| | | | | |
|-------------------------|---|------------------------------|-----------------------------------|--|
| Name: | 2022 Residential Codes and New Construction | Last Updated: | 5/25/2021 20:05 | |
| Customer Sector: | Residential | Avg Measure Life: | | |
| Region : | Vegas | Energy Savings Curve: | Multiple | |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xdsm | |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx | |
| Notes: | | Program DB Name: | PD_Vegas_2022PV_April2021_AY.xlsx | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$518,034 | \$581,512 | (\$63,478) | 0.89 | \$0.118 |
| Total Resource Cost (TRC) | \$450,464 | \$581,512 | (\$131,048) | 0.77 | \$0.118 |
| Utility Cost Test (UCT) | \$450,464 | \$420,000 | \$30,464 | 1.07 | \$0.085 |
| Participant Cost Test (PCT) | \$964,187 | \$525,731 | \$438,455 | 1.83 | \$0.075 |
| Ratepayer Impact (RIM) | \$450,464 | \$888,430 | (\$437,966) | 0.51 | \$0.181 |
| Societal Cost (SCT) | \$535,815 | \$581,512 | (\$45,696) | 0.92 | \$0.118 |

**Includes rebates paid to freeriders*

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$420,000 | \$0 | \$0 | \$420,000 |
| Electric Benefits (\$) | \$32,930 | \$0 | \$0 | \$450,464 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 438,116 | 0 | 0 | 8,762,313 |
| Critical Peak Hour Demand (kW) | 160 | 0 | 0 | 160 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 90,642 | 0 | 0 | 1,809,641 |
| Total On Peak Hours (%) | | | | 20.65% |

**Savings in this section are adjusted for line loss and net-to-gross*

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 70.0% | | |

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| | | | |
|-------------------------|---|------------------------------|-----------------------------------|
| Name: | 2023 Residential Codes and New Construction | Last Updated: | 5/25/2021 20:12 |
| Customer Sector: | Residential | Avg Measure Life: | 20.00 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PV_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,458,723 | \$1,485,986 | (\$27,263) | 0.98 | \$0.110 |
| Total Resource Cost (TRC) | \$1,268,455 | \$1,485,986 | (\$217,531) | 0.85 | \$0.110 |
| Utility Cost Test (UCT) | \$1,268,455 | \$1,100,000 | \$168,455 | 1.15 | \$0.081 |
| Participant Cost Test (PCT) | \$2,546,386 | \$1,256,409 | \$1,289,977 | 2.03 | \$0.065 |
| Ratepayer Impact (RIM) | \$1,268,455 | \$2,388,970 | (\$1,120,515) | 0.53 | \$0.176 |
| Societal Cost (SCT) | \$1,508,418 | \$1,485,986 | \$22,432 | 1.02 | \$0.110 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,100,000 | \$0 | \$0 | \$1,100,000 |
| Electric Benefits (\$) | \$91,451 | \$0 | \$0 | \$1,268,455 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 1,205,553 | 0 | 0 | 24,111,066 |
| Critical Peak Hour Demand (kW) | 440 | 0 | 0 | 440 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 249,417 | 0 | 0 | 4,979,550 |
| Total On Peak Hours (%) | | | | 20.65% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 70.0% | | |

| | | | |
|-------------------------|---|------------------------------|-----------------------------------|
| Name: | 2024 Residential Codes and New Construction | Last Updated: | 5/25/2021 20:20 |
| Customer Sector: | Residential | Avg Measure Life: | 20.00 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PV_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$3,824,964 | \$2,129,397 | \$1,695,567 | 1.80 | \$0.061 |
| Total Resource Cost (TRC) | \$3,326,056 | \$2,129,397 | \$1,196,658 | 1.56 | \$0.061 |
| Utility Cost Test (UCT) | \$3,326,056 | \$1,560,000 | \$1,766,056 | 2.13 | \$0.045 |
| Participant Cost Test (PCT) | \$5,755,744 | \$1,853,426 | \$3,902,318 | 3.11 | \$0.037 |
| Ratepayer Impact (RIM) | \$3,326,056 | \$4,861,020 | (\$1,534,965) | 0.68 | \$0.140 |
| Societal Cost (SCT) | \$3,954,184 | \$2,129,397 | \$1,824,786 | 1.86 | \$0.061 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,560,000 | \$0 | \$0 | \$1,560,000 |
| Electric Benefits (\$) | \$215,733 | \$0 | \$0 | \$3,326,056 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 3,087,392 | 0 | 0 | 61,747,842 |
| Critical Peak Hour Demand (kW) | 1,126 | 0 | 0 | 1,126 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 638,752 | 0 | 0 | 12,752,504 |
| Total On Peak Hours (%) | | | | 20.65% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 70.0% | | |

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Sierra Pacific Input and Output Sheets

Sierra - Residential Codes and New Construction

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Rebate / Incentives per unit | Total Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effectiv e Useful Life | Incremental Measure Cost per Unit | Net-to- Gross |
|------------------|------------------------------------|---------------------------|-------------------------|------------|-----------|---------------------------------------|------------------------------------|------------------|--------------------------------------|-------------------------------------|------------------------------|--|------------------|
| Measures | \$280,000 | \$6,025 | \$74,975 | \$0 | \$199,000 | 0 | \$0 | \$0 | 0 | 0 | 20.0 | \$0 | 70.0% |
| Codes | | | | | | 398 | \$500 | \$199,000 | 1,005 | 400,000 | 20.0 | \$515 | 70.0% |
| New Construction | | | | | | 398 | \$500 | \$199,000 | 1,005 | 400,000 | 20.0 | \$515 | 70.0% |
| Total | | | | | | | | | | | | | |

Sierra - Residential Codes and New Construction

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Rebate / Incentives per unit | Total Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effectiv e Useful Life | Incremental Measure Cost per Unit | Net-to- Gross |
|------------------|------------------------------------|---------------------------|-------------------------|------------|-----------|---------------------------------------|------------------------------------|------------------|--------------------------------------|-------------------------------------|------------------------------|--|------------------|
| Measures | \$720,000 | \$54,314 | \$60,186 | \$0 | \$605,500 | 3,261 | \$0 | \$0 | 56 | 182,945 | 20.0 | \$0 | 70.0% |
| Codes | | | | | | 1,211 | \$500 | \$605,500 | 1,005 | 1,217,055 | 20.0 | \$515 | 70.0% |
| New Construction | | | | | | 4,472 | \$135 | \$605,500 | 1,005 | 1,400,000 | 20.0 | \$515 | 70.0% |
| Total | | | | | | | | | | | | | |

Sierra - Residential Codes and New Construction

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units or Participants | Rebate / Incentives per unit | Total Rebates | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effectiv e Useful Life | Incremental Measure Cost per Unit | Net-to- Gross |
|------------------|------------------------------------|---------------------------|-------------------------|------------|-----------|---------------------------------------|------------------------------------|------------------|--------------------------------------|-------------------------------------|------------------------------|--|------------------|
| Measures | \$1,040,000 | \$55,488 | \$104,512 | \$0 | \$880,000 | 3,424 | \$0 | \$0 | 506 | 1,731,200 | 20.0 | \$0 | 70.0% |
| Codes | | | | | | 1,760 | \$500 | \$880,000 | 1,005 | 1,768,800 | 20.0 | \$515 | 70.0% |
| New Construction | | | | | | 5,184 | \$170 | \$880,000 | 1,005 | 3,500,000 | 20.0 | \$515 | 70.0% |
| Total | | | | | | | | | | | | | |

| | | | |
|-------------------------|---|------------------------------|----------------------------------|
| Name: | 2022 Residential Codes and New Construction | Last Updated: | 5/25/2021 19:09 |
| Customer Sector: | Residential | Avg Measure Life: | Multiple |
| Region : | Reno | Energy Savings Curve: | DSM_PortPro_April2021_AY.xlsm |
| Start Year: | 2022 | Model File Name: | Reno_CAD_April2021_AY.xlsx |
| End Year: | 2022 | CAD File Name: | PD_Reno_2022PV_April2021_AY.xlsx |
| Notes: | | | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|--------------------------------------|
| NEB Total Resource Cost (NTRC) | \$338,598 | \$284,132 | \$54,466 | 1.19 | \$0.082 |
| Total Resource Cost (TRC) | \$294,433 | \$284,132 | \$10,301 | 1.04 | \$0.082 |
| Utility Cost Test (UCT) | \$294,433 | \$280,000 | \$14,433 | 1.05 | \$0.081 |
| Participant Cost Test (PCT) | \$568,031 | \$204,902 | \$363,129 | 2.77 | \$0.042 |
| Ratepayer Impact (RIM) | \$294,433 | \$538,322 | (\$243,889) | 0.55 | \$0.156 |
| Societal Cost (SCT) | \$351,190 | \$284,132 | \$67,058 | 1.24 | \$0.082 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$280,000 | \$0 | \$0 | \$280,000 |
| Electric Benefits (\$) | \$20,473 | \$0 | \$0 | \$294,433 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 298,826 | 0 | 0 | 5,976,521 |
| Critical Peak Hour Demand (kW) | 100 | 0 | 0 | 100 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 20,215 | 0 | 0 | 1,303,674 |
| Total On Peak Hours (%) | | | | 21.81% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | Secondary Benefits |
|---|--------------------------|
| Discount Rate: | 6.75% |
| Rate Escalator: | 0.00% |
| Inflation Rate (T&D): | 2.00% |
| Line Loss (Energy): | 6.30% |
| Line Loss (Demand): | 14.31% |
| Avoided T&D Capacity \$/MW: | \$46,748 |
| Environmental Adder (SCT only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% |
| Electric Retail Rate (\$/KWh): | \$0.08 |
| Gas Retail Rate (\$/therm) | \$0.39 |
| Net-To-Gross Ratio | 70.0% |
| | Other Savings |
| | \$0 |
| | Scenarios: |
| | Measure Life |
| | Energy Savings |
| | Avoided Energy Cost |
| | Avoided Capacity Cost |
| | Incremental Measure Cost |
| | 100% |
| | 100% |
| | 100% |
| | 100% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential Codes and New Construction Program Data Sheet

| | | | |
|-------------------------|--|------------------------------|-------------------------------|
| Name: | 2023 Residential Codes and New Construction | Last Updated: | 5/25/2021 19:17 |
| Customer Sector: | Residential | Avg Measure Life: | 20.00 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | Program DB Name: PD_Reno_2023PV_April2021_AY.xlsx | | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,214,567 | \$732,572 | \$481,995 | 1.66 | \$0.061 |
| Total Resource Cost (TRC) | \$1,056,145 | \$732,572 | \$323,573 | 1.44 | \$0.061 |
| Utility Cost Test (UCT) | \$1,056,145 | \$720,000 | \$336,145 | 1.47 | \$0.060 |
| Participant Cost Test (PCT) | \$1,897,109 | \$623,459 | \$1,273,650 | 3.04 | \$0.036 |
| Ratepayer Impact (RIM) | \$1,056,145 | \$1,624,127 | (\$567,982) | 0.65 | \$0.135 |
| Societal Cost (SCT) | \$1,259,507 | \$732,572 | \$526,935 | 1.72 | \$0.061 |

*Includes rebates paid to free riders

| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$720,000 | \$0 | \$0 | \$720,000 |
| Electric Benefits (\$) | \$71,997 | \$0 | \$0 | \$1,056,145 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 1,045,891 | 0 | 0 | 20,917,823 |
| Critical Peak Hour Demand (kW) | 351 | 0 | 0 | 351 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 70,752 | 0 | 0 | 4,562,858 |
| Total On Peak Hours (%) | | | | 21.81% |

*Savings in this section are adjusted for line loss and net-to-gross

| | | | |
|---|----------|---------------------------|------|
| Financial Data | | Secondary Benefits | |
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 70.0% | | |

| | | | |
|-------------------------|--|------------------------------|-------------------------------|
| Name: | 2024 Residential Codes and New Construction | Last Updated: | 5/25/2021 19:26 |
| Customer Sector: | Residential | Avg Measure Life: | 20.00 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | Program DB Name: PD_Reno_2024PV_April2021_AY.xlsx | | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$3,115,873 | \$1,058,270 | \$2,057,603 | 2.94 | \$0.035 |
| Total Resource Cost (TRC) | \$2,709,455 | \$1,058,270 | \$1,651,184 | 2.56 | \$0.035 |
| Utility Cost Test (UCT) | \$2,709,455 | \$1,040,000 | \$1,669,455 | 2.61 | \$0.034 |
| Participant Cost Test (PCT) | \$4,109,023 | \$906,101 | \$3,202,922 | 4.53 | \$0.021 |
| Ratepayer Impact (RIM) | \$2,709,455 | \$3,300,316 | (\$590,861) | 0.82 | \$0.109 |
| Societal Cost (SCT) | \$3,230,615 | \$1,058,270 | \$2,172,345 | 3.05 | \$0.035 |

*Includes rebates paid to free riders

| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,040,000 | \$0 | \$0 | \$1,040,000 |
| Electric Benefits (\$) | \$166,679 | \$0 | \$0 | \$2,709,455 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 2,614,728 | 0 | 0 | 52,294,557 |
| Critical Peak Hour Demand (kW) | 876 | 0 | 0 | 876 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 176,879 | 0 | 0 | 11,407,144 |
| Total On Peak Hours (%) | | | | 21.81% |

*Savings in this section are adjusted for line loss and net-to-gross

| | | | |
|---|----------|---------------------------|------|
| Financial Data | | Secondary Benefits | |
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 70.0% | | |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Low Income Program Data Sheet**

2020-2024 Low Income Program

Description

NV Energy's Low Income program ("Program") provides installation of new energy-savings appliances to low-income residential customers throughout NV Energy's service territories. The Program supports customers that have a higher ratio of utility bill to income and are financially unable to replace old and inefficient appliances in their homes.

The installation of new ENERGYSTAR® rated qualified refrigerators and electric clothes dryers, along with other energy savings measures, such as plug load controllers, occupancy and proximity sensors for lighting controls, and LED light bulbs, are installed at no cost to the customer through the Program. Any appliances that are identified as eligible to be replaced are removed and recycled in accordance with all applicable federal, state, and local guidelines.

NV Energy residential customers can apply to participate in the Program by submitting a paper or e-mail application form, calling the Program's customer service line, or qualifying through one of NV Energy's local partners. For all instances, applicants must:

- Submit a valid W-2 form or a Social Security statement verifying their income;
- Provide the names of all family members residing in their household;
- Submit Social Security 1099 or 104S Benefit Statement forms;
- Provide NV Energy electric bill;
- Provide proof of property owner's permission, if residence is a rental;
- The customer's household cannot exceed 200 percent of the U.S. Federal Poverty Guidelines.

The Program is designed to engage and increase customer participation through local community partners, targeted customer segmentation marketing, email blasts, evaluation and survey reporting, and collateral design. Direct and internal marketing efforts involving training the NV Energy customer engagement staff and customer service representatives in the Program's offerings are also conducted. Pursuant to NAC 704.934(8), NV Energy directs a minimum of 5 percent of its total DSM portfolio to its standalone Low Income Program, which benefits low-income customers in the Companies' service territories.

2020 Results

For the 2020 program year, the expenditures, demand and energy savings, and participant results for the Program are provided in Table DSM-45 below.

**Nevada Power Companies d/b/a as NV Energy
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Low Income Program Data Sheet**

Table DSM-45: 2020 Low Income Expenditures, Savings, and Participants Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|-------------------------------|--------------------|--------------------|----------------------------------|------------------|----------------|----------------------------------|------------|-----------|----------------------------------|--------------|------------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Low Income | \$2,100,000 | \$883,035 | (58.0%) | 1,653,543 | 269,145 | (83.7%) | 184 | 30 | (83.6%) | 800 | 260 | (67.5%) |
| Sierra | | | | | | | | | | | | |
| Low Income | \$700,000 | \$256,275 | (63.4%) | 555,556 | 58,403 | (89.5%) | 63 | 7 | (89.5%) | 250 | 57 | (77.2%) |
| NV Energy | \$2,800,000 | \$1,139,310 | (59.3%) | 2,209,099 | 327,548 | (85.2%) | 248 | 37 | (85.1%) | 1,050 | 317 | (69.8%) |

2020 Overall Results and Activities

The implementation contractor for the Program was established under contract in May 2020. This limited timeframe, along with the impacts of the COVID-19 pandemic, presented challenges for the Program. Marketing, community outreach partners' shutdowns, and manufacturing delays caused a challenge for customer participation, ultimately affecting the Program's ability to reach its goal.

Many community partner outreach programs were negatively impacted by COVID-19 restrictions. The Program met this challenge by expanding the qualification process access. Customers had the ability to complete online application forms, applications were available in the lobbies of the NV Energy buildings in Las Vegas and Reno, and applications were mailed to customers who were unable to travel or were unable to access the internet.

Manufacturing delays for refrigerators and dryers were extended to an eight-to-nine week wait time for those appliances to reach the Program's retail partner, Home Depot. In order to mitigate the wait times, a partnership was extended to Lowe's and small appliance retailers in rural Nevada.

The Program redesigned its marketing outreach and implemented a web-based presence on NV Energy's website and via our social media outlets. This allowed for customers to view program details, application process and the program's contact information. Bill inserts, emails blasts to customers participating in the bill assistance program, and advertising in the Value-Pack mailing were added to supplement customer outreach.

Other improvements made by the Program included:

- Website portal enhancements, which offered participants and community partners the ability to submit forms online.
- The development of a customer support team through the implementation contractor, which provided customer support for questions and application submissions.
- Program implementation for procuring appliances, delivery, installation, and removal of existing units through local retailers.

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Low Income Program Data Sheet

- Partnership with the Environmental Protection Agency’s responsible Appliance Disposal program through local retailers supporting the Program.

2020 Lessons Learned and Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years:

- Due to the delays in manufacturing during the 2020 program year associated with COVID-19, an installation component has been designed to be utilized during the action plan period to warehouse, deliver, install, and remove existing appliances for recycling. This component will mitigate customer wait times and increase customer satisfaction.
- Customer surveys will expand, which will require participants to complete them.
- Refrigerator ex-ante data will be carefully validated to improve data quality.

2021 Plan

For the 2021 program year, the authorized budgets, projected demand and energy savings targets, and participant goals for the Program are provided in Table DSM-46 below.

Table DSM-46: 2021 Low Income Authorized Budgets, Savings Targets, and Participant Goals

| 2021 Program Components | Authorized Budget Goal | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------|-------------------------------|--|---|-------------------------|
| Nevada Power | | | | |
| Low Income | \$2,500,000 | 146 | 1,545,700 | 800 |
| Sierra | | | | |
| Low Income | \$900,000 | 50 | 531,429 | 250 |
| NV Energy | \$3,400,000 | 196 | 2,077,129 | 1,050 |

The Program will continue to be implemented in collaboration with State and local agencies and organizations throughout Nevada, including, but not limited to, Southern Nevada Housing Authority, Nevada Rural Housing Authority, Washoe County Community Services Agency, and Project REACH. The partners, as well as other State weatherization programs that serve this target population, are relied upon to qualify low-income customers for participation.

Once NV Energy residential customers are identified and deemed eligible to participate in the Program, they will be scheduled for delivery and installation of the qualified appliance replacement available to them. Customers will receive a 48-hour call before their appointment. If the customer does not answer the call, a voicemail will be left, and a customer service

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representative will send the customer an email reminding them of their appointment, if applicable. These changes not only enhance the customer's experience with the Program but will also ensure that the customer successfully completes their appointment.

Upon delivery, the customer receives direct install measures, such as LED lighting, power strips, or dusk-to-dawn photo sensors. Educational energy efficiency pamphlets will be left at the customers residence, this will enable the customer to better learn about other opportunities and no cost energy saving tips.

The application has been modified to include qualifying questions for other NV Energy programs available to the customer. Once the application is received by NV Energy, the Program's team will coordinate a low-income bundle, if applicable. This bundled approach will provide the customer an opportunity to participate in additional NV Energy programs.

2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year:

- For customers not participating in State or local agency programs, customers now have the ability to send applications independently if all Program qualifications have been met and verified, which allows for increased participation.
- Additional customer application displays will be presented in all NV Energy buildings that accommodate customer entry.
- Additional customer application displays will be placed in supermarkets or other community businesses who agree to display them. The Program team will also leverage the Business Energy Services Program and implementation contractor to connect with commercial customers and promote the Program to employees, family, and friends.
- The Program will continue to look for synergies within other NV Energy programs.

2022-2024 Proposed Plans

For the 2022 through 2024 program years, the proposed budget, projected demand and energy savings, and participant goals for the Program are provided in Table DSM-47 below.

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Sierra Pacific Power Companies d/b/a NV Energy
Low Income Program Data Sheet**

Table DSM-47: 2022 – 2024 Low Income Proposed Budgets, Savings Targets, and Participant Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|---------------------------|------------------------|--|---|-------------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Low Income | \$2,220,000 | 164 | 1,350,000 | 1,000 |
| Sierra | | | | |
| Low Income | \$704,000 | 40 | 300,000 | 300 |
| NV Energy | \$2,924,000 | 204 | 1,650,000 | 1,300 |
| 2023 | | | | |
| Nevada Power | | | | |
| Low Income | \$2,312,000 | 172 | 1,417,500 | 1,000 |
| Sierra | | | | |
| Low Income | \$731,000 | 40 | 300,000 | 300 |
| NV Energy | \$3,043,000 | 212 | 1,717,500 | 1,300 |
| 2024 | | | | |
| Nevada Power | | | | |
| Low Income | \$2,392,000 | 182 | 1,503,375 | 1,000 |
| Sierra | | | | |
| Low Income | \$756,000 | 40 | 300,000 | 300 |
| NV Energy | \$3,148,000 | 222 | 1,803,375 | 1,300 |

The Program will provide the installation of new energy-savings appliances to low-income residential customers throughout NV Energy’s service territories.

The installation of new ENERGY STAR® rated qualified refrigerators and electric clothes dryers, along with other energy savings measures, such as plug load controllers, occupancy and proximity sensors for lighting controls, and LED light bulbs will be installed at no cost to the customer through the Program. Any appliances that are identified as eligible to be replaced will continue to be removed and recycled in accordance with all applicable federal, state, and local guidelines.

Once the Program utilizes an internal installation method, the low-income super bundle appointment will be able to come to fruition. This bundle will include a smart thermostat, in-home energy assessment, information on accessing the online energy assessment tool, the direct install of energy saving measures, and educational material. A bundled approach will increase customer satisfaction and will reduce costs associated with all applicable programs by combining these services into one scheduled appointment. The Program will start synergizing appointments with one program at a time, until the logistics of coordinating all services into one appointment are achievable.

The application will continuously be modified to include qualifying questions for other NV Energy programs available to the customer. Once the application is received by NV Energy, the Program’s team will coordinate a low-income super bundle.

The Program will also partner with the Energy Education program to facilitate participation for low-income customers. This collaboration will be known as income qualifying educational events

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and will take place once every quarter. These events will ensure low-income zip code facilities have an application booth available for customers to apply to the Program in person, get educated on how to become more energy efficient, as well as enroll in other NV Energy programs.

Along with the income qualifying educational events, NV Energy will partner with low-income zip code communities via libraries, supermarkets, and businesses so that customers will have the opportunity to easily acquire Program information, obtain an application, and apply to the Program.

The Program's implementation team will put in place a Continuous Energy Improvement ("CEI") initiative with customers who have previously participated in the Program. Through NV Energy's contact center, these customers will be contacted and offered opportunities to participate in other NV Energy programs and be given educational tools and tips, such as a walk-through of the online energy assessments or an educational pamphlet.

The Program team will continue to work with qualifying community partners to promote and make the Program more accessible to low-income customers.

The Program will integrate with a new LED delivery method and partner with statewide food pantries to provide access to LED light bulbs.

2022-2024 Proposed Plan Enhancements

The following are the Program plan enhancements that have been implemented or will be implemented during the 2022 through 2024 program years:

- The Program will optimize resources by providing customers a bundled offering of various residential programs within the same appointment.
- Investigate weatherization and new technologies that may prove to be effective additions to the Program. Expand the energy efficient appliance offerings to provide effective additions to the appliance selection available to customers.
- Put in place a residential CEI initiative with customers who have previously participated in the Program.
- Expand customer engagement to include more public outreach events.
- Expand appliance retailer pool to include online purchasing options, such as the NV Energy PowerShift Smart Shop, an additional marketing digital energy efficiency engagement channel for customers. This will support the delivery and implementation of approved appliances through the PowerShift Smart Shop for residential customers. This is estimated to occur in the 2023 through 2024 timeframe.
- The Program will collaborate with other utilities to (1) educate low-income customers on how to be more efficient, (2) expand Program offerings, and (3) build community and a stronger utility and customer relationship

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
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Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-16 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-16 and DSM-17, which are calculated by the third-party evaluator, ADM.

Incremental Costs

There were no incremental costs or out-of-pocket expenses to the customer in this Program.

Incentives/Rebates

For this Program, qualified low-income customers are provided appliances and products at no cost to the customer. Incentives include refrigerators, plug load controllers, clothes dryers, LED lamps, and occupancy/proximity sensors for on/off lighting control.

Measure Life

The determined EUL for this program is 9.2 years for Nevada Power and 9.1 years for Sierra.

Measure Units

A unit is the appliance and/or measure installed at the customer's home.

Savings

The average projected energy savings per unit for Nevada Power is 218 kWh and for Sierra is 213 kWh across all measures.

Financial Analysis

Financial assumptions are provided in Section 4 of the DSM Plan and are presented on the "Financial Data" section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the "Stakeholder Perspectives & Tests" section of the output sheet. The section "Utility Savings & Costs" provides the annual and lifetime costs and savings from the utility perspective. The Program has an overall cost effectiveness NTRC score for 2020 of 0.12 for Nevada Power and 0.09 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 0.26 for 2022, 0.27 for 2023, and 0.29 for 2024 for Nevada Power and for Sierra 0.20 for 2022, 0.20 for 2023, and 0.20 for 2024.

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Low Income Program Data Sheet

Nevada Power Input and Output Sheets

Nevada Power - Low Income

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to-Gross |
|------------------|---------------------------|---------------------|----------------------|------------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|---------------|
| Measures | \$883,035 | \$192,748 | \$458,464 | \$231,824 | | | | | | | |
| LED Lighting | | | | | 395 | 247 | 97,593 | 4.7 | \$11 | \$4,254 | 100.0% |
| Refrigerator | | | | | 221 | 404 | 89,177 | 14.0 | \$674 | \$149,062 | 100.0% |
| Smart Strip | | | | | 211 | 187 | 39,457 | 10.0 | \$54 | \$11,432 | 100.0% |
| Dryer | | | | | 86 | 232 | 19,914 | 14.0 | \$713 | \$61,343 | 100.0% |
| Lighting Control | | | | | 324 | 71 | 23,004 | 4.7 | \$10 | \$3,094 | 100.0% |
| Total | | | | | 1,237 | 218 | 269,145 | 9.2 | \$185 | \$229,186 | 100.0% |

| | | | |
|-------------------------|-----------------|------------------------------|-----------------------------------|
| Name: | 2020 Low Income | Last Updated: | 5/25/2021 19:54 |
| Customer Sector: | Residential | Avg Measure Life: | 9.25 |
| Region : | Vegas | Energy Savings Curve: | Low Income |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$103,464 | \$883,035 | (\$779,572) | 0.12 | \$0.465 |
| Total Resource Cost (TRC) | \$82,771 | \$883,035 | (\$800,264) | 0.09 | \$0.465 |
| Utility Cost Test (UCT) | \$82,771 | \$883,035 | (\$800,264) | 0.09 | \$0.465 |
| Participant Cost Test (PCT) | \$412,723 | \$0 | \$412,723 | | \$0.000 |
| Ratepayer Impact (RIM) | \$82,771 | \$1,063,934 | (\$981,163) | 0.08 | \$0.560 |
| Societal Cost (SCT) | \$108,898 | \$883,035 | (\$774,137) | 0.12 | \$0.465 |

*Includes rebates paid to free riders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$883,035 | \$0 | \$0 | \$883,035 |
| Electric Benefits (\$) | \$10,003 | \$0 | \$0 | \$82,771 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 282,638 | 0 | 0 | 2,613,414 |
| Critical Peak Hour Demand (kW) | 33 | 0 | 0 | 33 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 23,434 | 0 | 0 | 216,382 |
| Total On Peak Hours (%) | | | | 8.28% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|-------------|------------------------------|-----------------|
| Name: | Low Income | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 9.25 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:52 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| | | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-------------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$103,952 | \$883,035 | (\$779,084) | 0.12 | \$0.338 |
| Total Resource Cost (TRC) | \$83,161 | \$883,035 | (\$799,874) | 0.09 | \$0.338 |
| Utility Cost Test (UCT) | \$83,161 | \$883,035 | (\$799,874) | 0.09 | \$0.338 |
| Participant Cost Test (PCT) | \$412,723 | \$0 | \$412,723 | | \$0.000 |
| Rate Payer Impact (RIM) | \$83,161 | \$1,063,934 | (\$980,773) | 0.08 | \$0.407 |
| Societal Cost (SCT) | \$110,744 | \$883,035 | (\$772,291) | 0.13 | \$0.338 |

*Includes Rebates Paid to Free Riders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$883,035 | \$0 | \$0 | \$883,035 |
| Electric Benefit (\$) | \$10,055 | \$0 | \$0 | \$83,161 |
| Gas Benefit (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 282,638 | 0 | 0 | 2,613,414 |
| Critical Peak Hour Demand (kW) | 33 | 0 | 0 | 33 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 23,401 | 0 | 0 | 216,382 |
| Total on Peak Hours (%) | | | | 8.28% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-to-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Low Income Program Data Sheet

Nevada Power - Low Income

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to- Gross |
|------------------|------------------------------------|---------------------------|-------------------------|-------------|--------------------|---------------------------------|----------------------------------|-----------------------------|-----------------------------|--------------------------|------------------|
| Measures | \$2,220,000 | \$484,578 | \$724,366 | \$1,011,055 | | | | | | | |
| LED Lighting | | | | | 2,240 | 247 | 553,280 | 4.7 | \$11 | \$24,125 | 100.0% |
| Refrigerator | | | | | 1,250 | 404 | 504,395 | 14.0 | \$674 | \$843,113 | 100.0% |
| Smart Strip | | | | | 1,250 | 187 | 233,750 | 10.0 | \$54 | \$67,725 | 100.0% |
| Dryer | | | | | 100 | 232 | 23,156 | 14.0 | \$713 | \$71,329 | 100.0% |
| Lighting Control | | | | | 499 | 71 | 35,419 | 4.7 | \$10 | \$4,764 | 100.0% |
| Total | | | | | 5,339 | 253 | 1,350,000 | 9.3 | \$189 | \$1,011,055 | 100.0% |

Nevada Power - Low Income

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to- Gross |
|------------------|------------------------------------|---------------------------|-------------------------|-------------|--------------------|---------------------------------|----------------------------------|-----------------------------|-----------------------------|--------------------------|------------------|
| Measures | \$2,312,000 | \$504,660 | \$758,359 | \$1,048,981 | | | | | | | |
| LED Lighting | | | | | 2,400 | 247 | 592,970 | 4.7 | \$11 | \$25,848 | 100.0% |
| Refrigerator | | | | | 1,300 | 404 | 524,571 | 14.0 | \$674 | \$876,837 | 100.0% |
| Smart Strip | | | | | 1,300 | 187 | 243,100 | 10.0 | \$54 | \$70,434 | 100.0% |
| Dryer | | | | | 100 | 232 | 23,156 | 14.0 | \$713 | \$71,329 | 100.0% |
| Lighting Control | | | | | 475 | 71 | 33,704 | 4.7 | \$10 | \$4,533 | 100.0% |
| Total | | | | | 5,575 | 254 | 1,417,500 | 9.2 | \$188 | \$1,048,981 | 100.0% |

Nevada Power - Low Income

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to- Gross |
|------------------|------------------------------------|---------------------------|-------------------------|-------------|--------------------|---------------------------------|----------------------------------|-----------------------------|-----------------------------|--------------------------|------------------|
| Measures | \$2,392,000 | \$513,905 | \$738,927 | \$1,139,168 | | | | | | | |
| LED Lighting | | | | | 2,450 | 247 | 605,324 | 4.7 | \$11 | \$26,387 | 100.0% |
| Refrigerator | | | | | 1,425 | 404 | 575,248 | 14.0 | \$674 | \$961,148 | 100.0% |
| Smart Strip | | | | | 1,425 | 187 | 266,475 | 10.0 | \$54 | \$77,207 | 100.0% |
| Dryer | | | | | 98 | 232 | 22,693 | 14.0 | \$713 | \$69,902 | 100.0% |
| Lighting Control | | | | | 474 | 71 | 33,636 | 4.7 | \$10 | \$4,524 | 100.0% |
| Total | | | | | 5,872 | 256 | 1,503,375 | 9.3 | \$194 | \$1,139,168 | 100.0% |

| | | | |
|-------------------------|-----------------|------------------------------|-----------------------------------|
| Name: | 2022 Low Income | Last Updated: | 5/25/2021 20:04 |
| Customer Sector: | Residential | Avg Measure Life: | 9.25 |
| Region : | Vegas | Energy Savings Curve: | Low Income |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AV.xlsm |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AV.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PV_April2021_AV.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-----------|--------------------------------------|
| NEB Total Resource Cost (NTRC) | \$572,607 | \$2,219,999 | (\$1,647,392) | 0.26 | \$0.233 |
| Total Resource Cost (TRC) | \$458,086 | \$2,219,999 | (\$1,761,913) | 0.21 | \$0.233 |
| Utility Cost Test (UCT) | \$458,086 | \$2,219,999 | (\$1,761,913) | 0.21 | \$0.233 |
| Participant Cost Test (PCT) | \$1,920,249 | \$0 | \$1,920,249 | | \$0.000 |
| Ratepayer Impact (RIM) | \$458,086 | \$3,129,194 | (\$2,671,108) | 0.15 | \$0.328 |
| Societal Cost (SCT) | \$603,431 | \$2,219,999 | (\$1,616,568) | 0.27 | \$0.233 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-------------|------|------|---------------|
| Total Utility Investment (\$) | \$2,219,999 | \$0 | \$0 | \$2,219,999 |
| Electric Benefits (\$) | \$58,130 | \$0 | \$0 | \$458,086 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 1,417,680 | 0 | 0 | 13,116,265 |
| Critical Peak Hour Demand (kW) | 164 | 0 | 0 | 164 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 117,543 | 0 | 0 | 1,085,981 |
| Total On Peak Hours (%) | | | | 8.28% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | | |
| Line Loss (Energy): | 4.77% | Scenarios: | |
| Line Loss (Demand): | 9.93% | Measure Life | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Energy Savings | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Energy Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% | Avoided Capacity Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | Incremental Measure Cost | 100% |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Low Income Program Data Sheet

| | | | |
|-------------------------|-----------------|------------------------------|-----------------------------------|
| Name: | 2023 Low Income | Last Updated: | 5/25/2021 20:13 |
| Customer Sector: | Residential | Avg Measure Life: | 9.20 |
| Region : | Vegas | Energy Savings Curve: | Low Income |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$620,087 | \$2,312,000 | (\$1,691,913) | 0.27 | \$0.232 |
| Total Resource Cost (TRC) | \$496,069 | \$2,312,000 | (\$1,815,930) | 0.21 | \$0.232 |
| Utility Cost Test (UCT) | \$496,069 | \$2,312,000 | (\$1,815,930) | 0.21 | \$0.232 |
| Participant Cost Test (PCT) | \$1,999,598 | \$0 | \$1,999,598 | | \$0.000 |
| Ratepayer Impact (RIM) | \$496,069 | \$3,262,616 | (\$2,766,547) | 0.15 | \$0.327 |
| Societal Cost (SCT) | \$653,609 | \$2,312,000 | (\$1,658,391) | 0.28 | \$0.232 |

**Includes rebates paid to freeriders*

| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$2,312,000 | \$0 | \$0 | \$2,312,000 |
| Electric Benefits (\$) | \$60,539 | \$0 | \$0 | \$496,069 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 1,488,386 | 0 | 0 | 13,697,663 |
| Critical Peak Hour Demand (kW) | 172 | 0 | 0 | 172 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 123,405 | 0 | 0 | 1,134,119 |
| Total On Peak Hours (%) | | | | 8.28% |

**Savings in this section are adjusted for line loss and net-to-gross*

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|-----------------|------------------------------|-----------------------------------|
| Name: | 2024 Low Income | Last Updated: | 5/25/2021 20:20 |
| Customer Sector: | Residential | Avg Measure Life: | 9.34 |
| Region : | Vegas | Energy Savings Curve: | Low Income |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$694,134 | \$2,392,000 | (\$1,697,866) | 0.29 | \$0.223 |
| Total Resource Cost (TRC) | \$555,307 | \$2,392,000 | (\$1,836,693) | 0.23 | \$0.223 |
| Utility Cost Test (UCT) | \$555,307 | \$2,392,000 | (\$1,836,693) | 0.23 | \$0.223 |
| Participant Cost Test (PCT) | \$2,158,794 | \$0 | \$2,158,794 | | \$0.000 |
| Ratepayer Impact (RIM) | \$555,307 | \$3,411,626 | (\$2,856,318) | 0.16 | \$0.319 |
| Societal Cost (SCT) | \$731,867 | \$2,392,000 | (\$1,660,134) | 0.31 | \$0.223 |

**Includes rebates paid to freeriders*

| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$2,392,000 | \$0 | \$0 | \$2,392,000 |
| Electric Benefits (\$) | \$59,592 | \$0 | \$0 | \$555,307 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 1,578,313 | 0 | 0 | 14,738,500 |
| Critical Peak Hour Demand (kW) | 182 | 0 | 0 | 182 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 130,861 | 0 | 0 | 1,220,296 |
| Total On Peak Hours (%) | | | | 8.28% |

**Savings in this section are adjusted for line loss and net-to-gross*

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Low Income Program Data Sheet

Sierra Input and Output Sheets

Sierra - Low Income

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to-Gross |
|------------------|---------------------------|---------------------|----------------------|------------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|---------------|
| Measures | \$256,275 | \$59,529 | \$151,056 | \$45,690 | | | | | | | |
| LED Lighting | | | | | 87 | 247 | 21,495 | 4.7 | \$11 | \$936 | 100.0% |
| Refrigerator | | | | | 31 | 501 | 15,536 | 14.0 | \$674 | \$20,897 | 100.0% |
| Smart Strip | | | | | 50 | 187 | 9,350 | 10.0 | \$54 | \$2,706 | 100.0% |
| Dryer | | | | | 28 | 232 | 6,484 | 14.0 | \$704 | \$19,713 | 100.0% |
| Lighting Control | | | | | 78 | 71 | 5,538 | 4.7 | \$11 | \$834 | 100.0% |
| Total | | | | | 274 | 213 | 58,403 | 9.1 | \$165 | \$45,086 | 100.0% |

| | | | |
|-------------------------|-----------------|------------------------------|----------------------------------|
| Name: | 2020 Low Income | Last Updated: | 5/25/2021 18:58 |
| Customer Sector: | Residential | Avg Measure Life: | 9.05 |
| Region : | Reno | Energy Savings Curve: | Low Income |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$23,006 | \$256,275 | (\$233,269) | 0.09 | \$0.612 |
| Total Resource Cost (TRC) | \$18,405 | \$256,275 | (\$237,870) | 0.07 | \$0.612 |
| Utility Cost Test (UCT) | \$18,405 | \$256,275 | (\$237,870) | 0.07 | \$0.612 |
| Participant Cost Test (PCT) | \$77,089 | \$0 | \$77,089 | | \$0.000 |
| Ratepayer Impact (RIM) | \$18,405 | \$287,674 | (\$269,269) | 0.06 | \$0.687 |
| Societal Cost (SCT) | \$24,206 | \$256,275 | (\$232,069) | 0.09 | \$0.612 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$256,275 | \$0 | \$0 | \$256,275 |
| Electric Benefits (\$) | \$2,245 | \$0 | \$0 | \$18,405 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 62,330 | 0 | 0 | 564,392 |
| Critical Peak Hour Demand (kW) | 8 | 0 | 0 | 8 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 2,288 | 0 | 0 | 120,412 |
| Total On Peak Hours (%) | | | | 21.33% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|-------------|------------------------------|-----------------|
| Name: | Low Income | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 9.05 |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:04 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| Notes: | | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-------------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$23,006 | \$256,275 | (\$233,269) | 0.09 | \$0.454 |
| Total Resource Cost (TRC) | \$18,405 | \$256,275 | (\$237,870) | 0.07 | \$0.454 |
| Utility Cost Test (UCT) | \$18,405 | \$256,275 | (\$237,870) | 0.07 | \$0.454 |
| Participant Cost Test (PCT) | \$77,089 | \$0 | \$77,089 | | \$0.000 |
| Rate Payer Impact (RIM) | \$18,405 | \$287,674 | (\$269,269) | 0.06 | \$0.510 |
| Societal Cost (SCT) | \$24,206 | \$256,275 | (\$232,069) | 0.09 | \$0.454 |

*Includes Rebates Paid to Freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$256,275 | \$0 | \$0 | \$256,275 |
| Electric Benefit (\$) | \$2,245 | \$0 | \$0 | \$18,405 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 62,330 | 0 | 0 | 564,392 |
| Critical Peak Hour Demand (kW) | 8 | 0 | 0 | 8 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 2,280 | 0 | 0 | 20,649 |
| Total on Peak Hours (%) | | | | 3.66% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate | 6.75% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 6.30% | Measure Life | 100% |
| Line Loss (Demand) | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-to-Gross Ratio | 100.00% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Low Income Program Data Sheet

Sierra - Low Income

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementati on Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to- Gross |
|------------------|------------------------------------|---------------------------|--------------------------|------------|--------------------|---------------------------------|-------------------------------------|--------------------------|-----------------------------|--------------------------|------------------|
| Measures | \$704,000 | \$163,528 | \$308,851 | \$231,620 | | | | | | | |
| LED Lighting | | | | | 400 | 247.1 | 98,828 | 4.7 | \$11 | \$4,304 | 100.0% |
| Refrigerator | | | | | 200 | 501.2 | 100,232 | 14.0 | \$674 | \$134,818 | 100.0% |
| Smart Strip | | | | | 400 | 187.0 | 74,800 | 10.0 | \$54 | \$21,644 | 100.0% |
| Dryer | | | | | 100 | 231.6 | 23,157 | 14.0 | \$704 | \$70,405 | 100.0% |
| Lighting Control | | | | | 42 | 71.0 | 2,983 | 4.7 | \$11 | \$449 | 100.0% |
| Total | | | | | 1,142 | 263 | 300,000 | 9.8 | \$203 | \$231,620 | 100.0% |

Sierra - Low Income

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementati on Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to- Gross |
|------------------|------------------------------------|---------------------------|--------------------------|------------|--------------------|---------------------------------|-------------------------------------|--------------------------|-----------------------------|--------------------------|------------------|
| Measures | \$731,000 | \$169,800 | \$329,580 | \$231,620 | | | | | | | |
| LED Lighting | | | | | 400 | 247 | 98,828 | 4.7 | \$11 | \$4,304 | 100.0% |
| Refrigerator | | | | | 200 | 501 | 100,232 | 14.0 | \$674 | \$134,818 | 100.0% |
| Smart Strip | | | | | 400 | 187 | 74,800 | 10.0 | \$54 | \$21,644 | 100.0% |
| Dryer | | | | | 100 | 232 | 23,157 | 14.0 | \$704 | \$70,405 | 100.0% |
| Lighting Control | | | | | 42 | 71 | 2,983 | 4.7 | \$11 | \$449 | 100.0% |
| Total | | | | | 1,142 | 263 | 300,000 | 9.8 | \$203 | \$231,620 | 100.0% |

Sierra - Low Income

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementati on Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to- Gross |
|------------------|------------------------------------|---------------------------|--------------------------|------------|--------------------|---------------------------------|-------------------------------------|--------------------------|-----------------------------|--------------------------|------------------|
| Measures | \$756,000 | \$175,607 | \$348,773 | \$231,620 | | | | | | | |
| LED Lighting | | | | | 400 | 247 | 98,828 | 4.7 | \$11 | \$4,304 | 100.0% |
| Refrigerator | | | | | 200 | 501 | 100,232 | 14.0 | \$674 | \$134,818 | 100.0% |
| Smart Strip | | | | | 400 | 187 | 74,800 | 10.0 | \$54 | \$21,644 | 100.0% |
| Dryer | | | | | 100 | 232 | 23,157 | 14.0 | \$704 | \$70,405 | 100.0% |
| Lighting Control | | | | | 42 | 71 | 2,983 | 4.7 | \$11 | \$449 | 100.0% |
| Total | | | | | 1,142 | 263 | 300,000 | 9.8 | \$203 | \$231,620 | 100.0% |

| | | | |
|-------------------------|-----------------|------------------------------|----------------------------------|
| Name: | 2022 Low Income | Last Updated: | 5/25/2021 19:10 |
| Customer Sector: | Residential | Avg Measure Life: | 9.85 |
| Region : | Reno | Energy Savings Curve: | Low Income |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|--------------------------------------|
| NEB Total Resource Cost (NTRC) | \$140,901 | \$703,999 | (\$563,099) | 0.20 | \$0.305 |
| Total Resource Cost (TRC) | \$112,721 | \$703,999 | (\$591,279) | 0.16 | \$0.305 |
| Utility Cost Test (UCT) | \$112,721 | \$703,999 | (\$591,279) | 0.16 | \$0.305 |
| Participant Cost Test (PCT) | \$404,570 | \$0 | \$404,570 | | \$0.000 |
| Ratepayer Impact (RIM) | \$112,721 | \$876,949 | (\$764,229) | 0.13 | \$0.380 |
| Societal Cost (SCT) | \$148,447 | \$703,999 | (\$555,552) | 0.21 | \$0.305 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$703,999 | \$0 | \$0 | \$703,999 |
| Electric Benefits (\$) | \$13,269 | \$0 | \$0 | \$13,269 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 320,171 | 0 | 0 | 3,152,573 |
| Critical Peak Hour Demand (kW) | 40 | 0 | 0 | 40 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 11,753 | 0 | 0 | 672,596 |
| Total On Peak Hours (%) | | | | 21.33% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | Secondary Benefits |
|---|--------------------|
| Discount Rate: | 6.75% |
| Rate Escalator: | 0.00% |
| Inflation Rate (T&D): | 2.00% |
| Line Loss (Energy): | 6.30% |
| Line Loss (Demand): | 14.31% |
| Avoided T&D Capacity \$/MW: | \$46,748 |
| Environmental Adder (SCT only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% |
| Electric Retail Rate (\$/KWh): | \$0.08 |
| Gas Retail Rate (\$/therm) | \$0.39 |
| Net-To-Gross Ratio | 100.0% |

| | |
|--------------------------|------|
| Other Savings | \$0 |
| Scenarios: | |
| Measure Life | 100% |
| Energy Savings | 100% |
| Avoided Energy Cost | 100% |
| Avoided Capacity Cost | 100% |
| Incremental Measure Cost | 100% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Low Income Program Data Sheet

| | | | |
|-------------------------|-----------------|------------------------------|----------------------------------|
| Name: | 2023 Low Income | Last Updated: | 5/25/2021 19:17 |
| Customer Sector: | Residential | Avg Measure Life: | 9.85 |
| Region : | Reno | Energy Savings Curve: | Low Income |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$145,929 | \$731,000 | (\$585,071) | 0.20 | \$0.317 |
| Total Resource Cost (TRC) | \$116,744 | \$731,000 | (\$614,257) | 0.16 | \$0.317 |
| Utility Cost Test (UCT) | \$116,744 | \$731,000 | (\$614,257) | 0.16 | \$0.317 |
| Participant Cost Test (PCT) | \$404,570 | \$0 | \$404,570 | | \$0.000 |
| Ratepayer Impact (RIM) | \$116,744 | \$903,950 | (\$787,206) | 0.13 | \$0.392 |
| Societal Cost (SCT) | \$153,771 | \$731,000 | (\$577,229) | 0.21 | \$0.317 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$731,000 | \$0 | \$0 | \$731,000 |
| Electric Benefits (\$) | \$13,169 | \$0 | \$0 | \$116,744 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 320,171 | 0 | 0 | 3,152,573 |
| Critical Peak Hour Demand (kW) | 40 | 0 | 0 | 40 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 11,753 | 0 | 0 | 672,596 |
| Total On Peak Hours (%) | | | | 21.33% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|-----------------|------------------------------|----------------------------------|
| Name: | 2024 Low Income | Last Updated: | 5/25/2021 19:26 |
| Customer Sector: | Residential | Avg Measure Life: | 9.85 |
| Region : | Reno | Energy Savings Curve: | Low Income |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$151,802 | \$756,000 | (\$604,199) | 0.20 | \$0.328 |
| Total Resource Cost (TRC) | \$121,441 | \$756,000 | (\$634,559) | 0.16 | \$0.328 |
| Utility Cost Test (UCT) | \$121,441 | \$756,000 | (\$634,559) | 0.16 | \$0.328 |
| Participant Cost Test (PCT) | \$404,570 | \$0 | \$404,570 | | \$0.000 |
| Ratepayer Impact (RIM) | \$121,441 | \$928,950 | (\$807,509) | 0.13 | \$0.403 |
| Societal Cost (SCT) | \$159,993 | \$756,000 | (\$596,007) | 0.21 | \$0.328 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$756,000 | \$0 | \$0 | \$756,000 |
| Electric Benefits (\$) | \$12,205 | \$0 | \$0 | \$121,441 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 320,171 | 0 | 0 | 3,152,573 |
| Critical Peak Hour Demand (kW) | 40 | 0 | 0 | 40 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 11,753 | 0 | 0 | 672,596 |
| Total On Peak Hours (%) | | | | 21.33% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 25.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Direct Install/Direct Install and Deep Retrofit Program Data Sheet**

2020-2021 Direct Install Program and 2022-2024 Direct Install and Deep Retrofits Program

Description

The Direct Install program (“Program”) installs low-cost energy efficient measures directly in residential homes at no cost to the customer. The Direct Install (“DI”) measures are installed by a trained NV Energy PowerShift Energy Advisor. These measures work in conjunction with an in-home energy assessment, a smart thermostat installation, or a combination of both, which is referred to as a bundled appointment, to help customers save money and energy. All NV Energy residential customers qualify for the Program when participating in the in-home assessment or the smart thermostat program.

The Program also provides an educational component by advising customers of additional energy-efficient products and services available to them and educates the customer on other DSM programs. The advisor provides the customer a NV Energy-created leave-behind reference to further support these efforts. The Program targets outreach efforts to all residential customers through email, NV Energy’s website, media, or Energy Education events.

The DI measures currently installed in a customer’s home include:

- HVAC filter: A Minimum Efficiency Reporting Value (“MERV”) rating of four or greater filter replacement;
- LED lamps: Replace a minimum of six incandescent, halogen or compact fluorescent lamp light lamps and track the replaced bulbs so they are properly disposed;
- Dusk-to-Dawn Photocells: Up to two photocells;
- Dusk-to-Dawn Photocell with integrated LED: Up to four combo photocells with LED;
- Refrigerator thermometer card; and
- Refrigerant line insulation: Six feet of air-conditioning refrigerant line insulation on the outside condenser unit.

2020 Results

For the 2020 program year, the expenditures, demand and energy savings, and participant results for the Program are provided in Table DSM-48 below.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Direct Install/Direct Install and Deep Retrofit Program Data Sheet**

Table DSM-48: 2020 Direct Install Expenditures, Savings, and Participants Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|-------------------------------|------------------|------------------|----------------------------------|------------------|----------------|----------------------------------|------------|-----------|----------------------------------|--------------|--------------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Direct Install | \$500,000 | \$243,715 | (51.3%) | 1,219,512 | 634,394 | (48.0%) | 119 | 58 | (51.3%) | 3,500 | 2,060 | (41.1%) |
| Sierra | | | | | | | | | | | | |
| Direct Install | \$150,000 | \$86,117 | (42.6%) | 347,226 | 136,760 | (60.6%) | 36 | 14 | (61.3%) | 1,200 | 612 | (49.0%) |
| NV Energy | \$650,000 | \$329,832 | (49.3%) | 1,566,739 | 771,154 | (50.8%) | 155 | 72 | (53.6%) | 4,700 | 2,672 | (43.1%) |

2020 Overall Results and Activities

Throughout 2020, the Program was implemented in conjunction with an in-home energy assessment and as a bundled appointment service, which included smart thermostat installation throughout NV Energy's service territories. Customers who participated in the Program were provided with free energy saving measures, which helped customers immediately begin to realize savings. This also helped instill behavioral changes so customers could continue to implement them in their home.

NV Energy delivered the Program as follows. At Nevada Power, 2,060 customers received installed measures in their homes, while Sierra provided measures to 612 customers' homes. Approximately 82 percent of customers that received an in-home energy assessment also received installed measures. This was a 16 percent increase of DI measures installed from 2019. The Program bundled 1,843 appointments with DI measures, in-home energy assessments, and residential smart thermostat installations.

During 2020, the Program made the following improvements:

- Modified the DSMC template to match evaluation requirements needed for improved data quality and to better identify issues during the M&V analysis;
- Updated ZOHO, NV Energy's inventory tool and database source, to track DI measures and pertinent inventory information to improve inventory tracking, cost and quality control efficiency.

Due to the COVID-19 pandemic, NV Energy took proactive efforts to suspend programs, including DI, because it required entry into the customer's home. This suspension lasted nearly four months and has had an impact on the overall 2020 DI participation, budget and kWh saving targets. During the suspension NV Energy reviewed the measures and tools used in the program and updates were made for better efficiency and to enhance the customer experience during the installation of DI measures.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Direct Install/Direct Install and Deep Retrofit Program Data Sheet**

2020 Lessons Learned and Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years:

- Based on feedback from customers and NV Energy's field contractor, the implementation of leaving an air filter behind or installing an air filter whistle was successful and will continue into 2021. It improved the EUL and energy efficiency of the measure and increased customer satisfaction with those customers who participated in the Program.
- NV Energy introduced LED lamps with integrated photodiode at the end of the third quarter to increase the success rate and cost-efficiency. This was successful and NV Energy will proceed with full implementation in 2021.
- Bundling DSM services improved the cost-effectiveness for field service installations. The Program aims to standardize bundling of DSM services, which will improve cost-effectiveness and safety given there will be fewer truck rolls.
- During the suspension, the Companies recognized the demand and need for energy efficiency within the community. When the Program reinstated in-home visits, our field services had a backlog of over 1,200 inquiries from customers wanting to participate in residential programs to help them save energy, DI was among the frequent requests.

2021 Plan

The authorized budgets, projected demand and energy savings targets, and participant goals for the Program for the 2021 program year are provided in Table DSM-49 below.

Table DSM-49: 2021 Direct Install Authorized Budgets, Savings Targets, and Participant Goals

| 2021 Program Components | Authorized Budget Goal | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------|-------------------------------|--|---|-------------------------|
| Nevada Power | | | | |
| Direct Install | \$500,000 | 103 | 1,500,000 | 3,500 |
| Sierra | | | | |
| Direct Install | \$150,000 | 43 | 600,000 | 1,200 |
| NV Energy | \$650,000 | 146 | 2,100,000 | 4,700 |

In 2021, the Program will continue to deliver measures to residential customers as it did in 2020 with an increased emphasis on income-eligible customers with additional new measures.

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Direct Install/Direct Install and Deep Retrofit Program Data Sheet

2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year:

- LED lamps will include two types of replacement lamps available per customer to decrease the NV Energy inventory carrying costs for light lamps.
- Offer DI measures with standalone smart thermostat installations, as well as with in-home assessments and bundled appointments.
- Offer customers a freezer thermometer along with the refrigerator thermometer measure currently provided.
- No longer offer refrigerant pipe insulation once the NV Energy inventory has been exhausted; however, the remaining inventory will continue to be installed. This could extend into the next Action Plan Period.
- Pilot installation of a smart power strip as part of the DI measures offered.

2022-2024 Proposed Plans

The proposed budget, projected demand and energy savings, and participant goals for the Program for the 2022 through 2024 program years are provided in Table DSM-50 below.

Table DSM-50: 2022-2024 Direct Install and Deep Retrofits Proposed Budgets, Savings Targets, and Participant Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|-----------------------------------|--------------------|-----------------------------------|------------------------------------|------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Direct Install and Deep Retrofits | \$680,000 | 528 | 2,140,000 | 8,000 |
| Sierra | | | | |
| Direct Install and Deep Retrofits | \$370,000 | 153 | 800,000 | 4,000 |
| NV Energy | \$1,050,000 | 681 | 2,940,000 | 12,000 |
| 2023 | | | | |
| Nevada Power | | | | |
| Direct Install and Deep Retrofits | \$740,000 | 588 | 2,320,000 | 8,000 |
| Sierra | | | | |
| Direct Install and Deep Retrofits | \$390,000 | 177 | 900,000 | 4,000 |
| NV Energy | \$1,130,000 | 765 | 3,220,000 | 12,000 |
| 2024 | | | | |
| Nevada Power | | | | |
| Direct Install and Deep Retrofits | \$800,000 | 654 | 2,500,000 | 8,000 |
| Sierra | | | | |
| Direct Install and Deep Retrofits | \$410,000 | 197 | 1,000,000 | 4,000 |
| NV Energy | \$1,210,000 | 851 | 3,500,000 | 12,000 |

Nevada Power Companies d/b/a as NV Energy
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NV Energy will expand the DI Program to include Deep Retrofits to be offered to residential customers. The Program will provide residential customers with direct installation of low-cost energy DI measures and will be offered at no cost to the customer ensuring all customers can benefit from these energy saving opportunities. NV Energy will increase its efforts to target those customers who meet income-eligibility guidelines through a targeted outreach strategy that encourages them to partake in PowerShift offerings that help them increase their energy efficiency and reduce their utility bill costs.

The 2022 through 2024 action plan period for DI will offer the following measures:

- LEDs,
- Dusk-to-Dawn with integrated LED photocells,
- HVAC filter,
- Freezer and Refrigerator thermometer card,
- Advance smart power strip.

The Program will focus on leveraging customer outreach initiatives to bring energy efficient measures to households throughout NV Energy's service territories. An example of this outreach is the PowerShift bundled appointment, which brings energy efficiency directly to the residential customers through educating customers about products and measures available for purchase and installation to save energy and money.

The Deep Retrofit component will offer incentives for the installation of deep retrofit measures in single-family homes. During the in-home energy assessment, the PowerShift Energy Advisors will screen each participant's home for additional retrofit measures available through the Deep Retrofit component. The energy advisor will confirm the fuel source for water and space heating, visually inspect the level of attic insulation and assess the condition of the ducts. If additional energy efficiency opportunities are identified, the energy advisor will review the recommended improvements with the customer and provide them with additional participation information for the deep retrofits.

Initially, NV Energy will launch the Program with the DI component through the above-mentioned channels. In 2022, NV Energy will hire an implementation contractor that will support the development of a trade ally network and start delivering the Deep Retrofit component mid-to-late-year. The delayed start is reflected in the Program budget and savings assumptions. NV Energy will initially target single-family homes to test Program processes and assumptions before targeting multi-family homes, which may bring complexities like split incentives and uncertainty around establishing the decision maker.

To deliver a successful Deep Retrofit component, a qualified trade ally network must be developed. To ensure that only qualified customers with eligible measures receive incentives, NV

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Energy is proposing a closed network that will be managed by the selected implementation contractor. A closed trade ally network means that all contractors cannot just participate in the program and receive an incentive, though any contractor that meets requirements can apply. Contractors will need to submit information and be selected through a competitive bidding process. Due to having an established cost for implementing the Program, contractors are well-educated on Program design and provide a higher level of service to the customer. Establishing a trade ally network that meets customer needs will take time; therefore, the residential Deep Retrofit component will experience a delayed launch. The multi-family component will launch in 2023.

By combining the Deep Retrofit component with the already established in-home energy assessment and DI component, NV Energy will have pre-installation information on every home that goes through the Program. This pre-installation inspection will pre-qualify customers for the Deep Retrofit component and NV Energy will require the selected implementation contractor to provide a quality assurance and quality control plan.

NV Energy strives to provide all customers with more opportunities to save, while ensuring qualified customer participate and all projects meet program requirements. The deep retrofit measures have two incentive tiers. The second tier provides additional financial incentives for low-income customers. Intentionally addressing low-income households is critical as they are one of the most underserved and vulnerable communities.

The Program team will continue to research and vet new measures for direct install and deep retrofits throughout the program cycle. NV Energy will periodically add cost-effective measures to the program based on customer needs and technology advances.

2022-2024 Proposed Plan Enhancements

The following are Program plan enhancements that will be implemented during the 2022 through 2024 program years:

- Once NV Energy's inventory has been exhausted, the Program will no longer offer refrigerant pipe insulation and standalone dusk-to-dawn photocells; however, the remaining inventory will continue to be installed.
- The Deep Retrofit component of the Program is designed to intentionally offer more customers the opportunity to participate, while addressing challenges experienced in prior program years. There are several Program delivery strategies that will allow NV Energy to scale up, while continuously incorporating process improvements:
 - An innovation delivery strategy, initially targeting single-family homes,
 - Development and management of a closed network of qualified contractors,
 - Pre-qualification during the Home Energy Assessment,
 - Two incentive tiers to address the low-income qualified segment.

**Nevada Power Companies d/b/a as NV Energy
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Direct Install/Direct Install and Deep Retrofit Program Data Sheet**

- Customers will be eligible for three Deep Retrofit options:
 - Combined air sealing and attic insulation,
 - Ceiling/attic insulation,
 - Duct sealing and insulation.

Expanding DI and launching the Deep Retrofit component into existing processes, marketing and outreach channels, promotional materials, and gaining market awareness will take time. Therefore, participation levels for the measures are lower in 2022 and ramp up in 2023 and 2024, when the deep retrofit component is expected to be fully integrated and operational. This is accounted for in both the savings and budget assumptions.

Measurement and Verification

The 2020 M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-09 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-09 and DSM-17, which are calculated by the third-party evaluator, ADM.

Incremental Costs

There were no incremental costs or out-of-pocket expenses to the customer in this Program.

Incentives/Rebates

This Program includes incentives by providing free DI measures in customers' homes.

Measure Life

As determined in the M&V report, the EUL for this Program was 4.5 years for Nevada Power and 6.2 years for Sierra.

Measure Units

The LED light lamps, HVAC filters, refrigerator thermometer, and photocell sensors are measured each as one unit. The refrigerant line insulation is measured by a six-foot unit.

Savings

The verified energy savings was an average of 44 kWh per unit for Nevada Power and 37 kWh per unit for Sierra.

Nevada Power Companies d/b/a as NV Energy
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Direct Install/Direct Install and Deep Retrofit Program Data Sheet

Financial Analysis

Financial assumptions are provided in Section 4 of the DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program has an overall cost effectiveness NTRC score for 2020 of 0.37 for Nevada Power and 0.34 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 0.91 for 2022, 1.06 for 2023, and 1.18 for 2024 for Nevada Power and for Sierra 0.63 for 2022, 0.75 for 2023, and 0.88 for 2024.

Nevada Power Input and Output Sheets

Nevada Power - Direct Install

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to-Gross |
|---|---------------------------|---------------------|----------------------|-----------------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|--------------|
| Measures | \$243,715 | \$50,305 | \$157,327 | \$36,082 | | | | | | | |
| Air Filter/Furnace Filter | | | | | 3,168 | 102 | 323,908 | 0.5 | \$5 | \$14,351 | 85.0% |
| LED Lighting | | | | | 9,343 | 29 | 275,510 | 8.3 | \$2 | \$17,004 | 85.0% |
| Photocells | | | | | 164 | 24 | 3,936 | 8.0 | \$6 | \$1,033 | 85.0% |
| Refrigerator Thermometer | | | | | 1,160 | 6 | 7,114 | 3.0 | \$1 | \$1,172 | 85.0% |
| Air-conditioner Refrigerant Line Insulation | | | | | 166 | 43 | 7,126 | 10.0 | \$3 | \$486 | 85.0% |
| LED – Photocell Combo | | | | | 326 | 52 | 16,800 | 5.8 | \$5 | \$1,565 | 85.0% |
| Total | | | | | 14,327 | 44 | 634,394 | 4.5 | \$2 | \$35,611 | 85.0% |

| | | | |
|-------------------------|---------------------|------------------------------|-----------------------------------|
| Name: | 2020 Direct Install | Last Updated: | 5/25/2021 19:53 |
| Customer Sector: | Residential | Avg Measure Life: | 4.21 |
| Region : | Vegas | Energy Savings Curve: | Direct Installation |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$90,745 | \$243,715 | (\$152,970) | 0.37 | \$0.127 |
| Total Resource Cost (TRC) | \$78,865 | \$243,715 | (\$164,849) | 0.32 | \$0.127 |
| Utility Cost Test (UCT) | \$78,865 | \$243,715 | (\$164,849) | 0.32 | \$0.127 |
| Participant Cost Test (PCT) | \$250,480 | \$0 | \$250,480 | | \$0.000 |
| Ratepayer Impact (RIM) | \$78,865 | \$425,952 | (\$347,087) | 0.19 | \$0.223 |
| Societal Cost (SCT) | \$95,843 | \$243,715 | (\$147,872) | 0.39 | \$0.127 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$243,715 | \$0 | \$0 | \$243,715 |
| Electric Benefits (\$) | \$20,132 | \$0 | \$0 | \$78,865 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 566,269 | 0 | 0 | 2,383,471 |
| Critical Peak Hour Demand (kW) | 66 | 0 | 0 | 49 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 48,044 | 0 | 0 | 201,941 |
| Total On Peak Hours (%) | | | | 8.47% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.06% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 85.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Direct Install/Direct Install and Deep Retrofit Program Data Sheet

| | | | |
|-------------------------|------------------------|------------------------------|-----------------|
| Name: | Direct Install Program | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 4.21 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:52 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| ACE guru™ Model | | | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-------------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$90,743 | \$243,715 | (\$152,972) | 0.37 | \$0.120 |
| Total Resource Cost (TRC) | \$78,863 | \$243,715 | (\$164,851) | 0.32 | \$0.120 |
| Utility Cost Test (UCT) | \$78,863 | \$243,715 | (\$164,851) | 0.32 | \$0.120 |
| Participant Cost Test (PCT) | \$250,480 | \$0 | \$250,480 | | \$0.000 |
| Rate Payer Impact (RIM) | \$78,863 | \$425,952 | (\$347,089) | 0.19 | \$0.210 |
| Societal Cost (SCT) | \$96,608 | \$243,715 | (\$147,106) | 0.40 | \$0.120 |

*Includes Rebates Paid to Freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$243,715 | \$0 | \$0 | \$243,715 |
| Electric Benefit (\$) | \$14,992 | \$0 | \$0 | \$78,863 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 566,269 | 0 | 0 | 2,383,471 |
| Critical Peak Hour Demand (kW) | 66 | 0 | 0 | 66 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 47,977 | 0 | 0 | 201,940 |
| Total on Peak Hours (%) | | | | 8.47% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.06% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-to-Gross Ratio | 85.0% | | |

Nevada Power - Direct Install and Deep Retrofit

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Income Qualified Rebate / Incentives | Rebate / Incentives per unit | Total Rebates | Incremental Measure Cost per unit | Total Incremental Measure Cost | Net-to-Gross |
|---|------------------------------|---------------------|----------------------|------------|----------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|--------------------------------------|------------------------------|-----------------|-----------------------------------|--------------------------------|-----------------|
| Measures | \$680,000 | \$114,938 | \$386,688 | \$114,742 | \$68,798 | | | | | | | | | | | | |
| Air Filter/Purview Filter | | | | | | 8,790 | 102 | 898,721 | 0.5 | \$5 | \$39,819 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.660% |
| LED Lighting | | | | | | 24,330 | 29 | 718,042 | 8.3 | \$2 | \$44,317 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.900% |
| Photocells | | | | | | 172 | 24 | 4,128 | 8.0 | \$6 | \$1,084 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.960% |
| Refrigerator/Freezer Thermometer | | | | | | 3,328 | 13 | 41,933 | 3.0 | \$1 | \$3,361 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.950% |
| Air-conditioner Refrigerant Line Insulation | | | | | | 149 | 48 | 6,396 | 10.0 | \$3 | \$437 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.980% |
| LED - Photocell Combo | | | | | | 1,130 | 52 | 59,264 | 5.8 | \$5 | \$5,520 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.960% |
| Advanced Power Strip | | | | | | 900 | 187 | 168,300 | 10.0 | \$22 | \$20,205 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.900% |
| Air Sealing and Attic Insulation | | | | | | 74 | 1,295 | 95,830 | 10.0 | \$0 | \$0 | \$600 | \$44,400 | \$900 | \$66,600 | \$900 | \$66,600 100.0% |
| Ceiling/Attic Insulation | | | | | | 10 | 502 | 4,734 | 20.0 | \$0 | \$0 | \$400 | \$3,804 | \$560 | \$5,326 | \$560 | \$5,326 100.0% |
| Low Income Duct Sealing and Insulation | | | | | | 30 | 964 | 28,920 | 20.0 | \$0 | \$0 | \$126 | \$3,791 | \$126 | \$3,790 | \$126 | \$3,790 100.0% |
| Duct Sealing and Insulation | | | | | | 118 | 964 | 113,752 | 20.0 | \$0 | \$0 | \$100 | \$11,800 | \$153 | \$18,017 | \$153 | \$18,017 100.0% |
| Total | | | | | | 39,071 | 88 | 2,140,060 | 6.9 | \$3 | \$114,742 | \$126 | \$1,100 | \$63,796 | \$408 | \$88,738 | \$1.4% |

Nevada Power - Direct Install and Deep Retrofit

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Income Qualified Rebate / Incentives | Rebate / Incentives per unit | Total Rebates | Incremental Measure Cost per unit | Total Incremental Measure Cost | Net-to-Gross |
|---|------------------------------|---------------------|----------------------|------------|----------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|--------------------------------------|------------------------------|-----------------|-----------------------------------|--------------------------------|-----------------|
| Measures | \$740,000 | \$124,938 | \$411,678 | \$107,428 | \$86,989 | | | | | | | | | | | | |
| Air Filter/Purview Filter | | | | | | 8,960 | 102 | 908,969 | 0.5 | \$5 | \$40,317 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.660% |
| LED Lighting | | | | | | 25,430 | 29 | 750,439 | 8.3 | \$2 | \$48,319 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.900% |
| Photocells | | | | | | 145 | 24 | 3,480 | 8.0 | \$6 | \$914 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.960% |
| Refrigerator/Freezer Thermometer | | | | | | 3,896 | 13 | 40,088 | 3.0 | \$1 | \$3,935 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.950% |
| Air-conditioner Refrigerant Line Insulation | | | | | | 112 | 48 | 4,808 | 10.0 | \$3 | \$328 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.980% |
| LED - Photocell Combo | | | | | | 950 | 52 | 48,957 | 5.8 | \$5 | \$4,540 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.960% |
| Advanced Power Strip | | | | | | 1,005 | 187 | 187,935 | 10.0 | \$11 | \$11,035 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.900% |
| Air Sealing and Attic Insulation | | | | | | 111 | 1,295 | 149,745 | 10.0 | \$0 | \$0 | \$600 | \$66,600 | \$900 | \$69,900 | \$900 | \$69,900 100.0% |
| Ceiling/Attic Insulation | | | | | | 15 | 502 | 7,530 | 20.0 | \$0 | \$0 | \$400 | \$6,000 | \$560 | \$6,400 | \$560 | \$6,400 100.0% |
| Low Income Duct Sealing and Insulation | | | | | | 44 | 964 | 42,416 | 20.0 | \$0 | \$0 | \$126 | \$5,559 | \$126 | \$5,559 | \$126 | \$5,559 100.0% |
| Duct Sealing and Insulation | | | | | | 178 | 964 | 171,592 | 20.0 | \$0 | \$0 | \$100 | \$17,800 | \$153 | \$27,179 | \$153 | \$27,179 100.0% |
| Total | | | | | | 40,806 | 87 | 2,320,000 | 6.4 | \$3 | \$107,428 | \$126 | \$1,100 | \$65,949 | \$408 | \$141,038 | \$2.4% |

Nevada Power - Direct Install and Deep Retrofit

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Income Qualified Rebate / Incentives | Rebate / Incentives per unit | Total Rebates | Incremental Measure Cost per unit | Total Incremental Measure Cost | Net-to-Gross |
|---|------------------------------|---------------------|----------------------|------------|-----------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|--------------------------------------|------------------------------|------------------|-----------------------------------|--------------------------------|------------------|
| Measures | \$800,000 | \$135,066 | \$428,728 | \$110,482 | \$128,758 | | | | | | | | | | | | |
| Air Filter/Purview Filter | | | | | | 9,200 | 102 | 940,642 | 0.5 | \$5 | \$41,678 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.660% |
| LED Lighting | | | | | | 26,220 | 29 | 773,188 | 8.3 | \$2 | \$47,720 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.900% |
| Photocells | | | | | | 130 | 24 | 3,120 | 8.0 | \$6 | \$819 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.960% |
| Refrigerator/Freezer Thermometer | | | | | | 4,000 | 13 | 50,394 | 3.0 | \$1 | \$4,039 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.950% |
| Air-conditioner Refrigerant Line Insulation | | | | | | 98 | 48 | 4,207 | 10.0 | \$3 | \$287 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.980% |
| LED - Photocell Combo | | | | | | 1,000 | 52 | 51,534 | 5.8 | \$5 | \$4,800 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.960% |
| Advanced Power Strip | | | | | | 1,010 | 187 | 188,870 | 10.0 | \$11 | \$11,110 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.900% |
| Air Sealing and Attic Insulation | | | | | | 148 | 1,295 | 191,650 | 10.0 | \$0 | \$0 | \$600 | \$88,800 | \$900 | \$133,200 | \$900 | \$133,200 100.0% |
| Ceiling/Attic Insulation | | | | | | 22 | 502 | 11,044 | 20.0 | \$0 | \$0 | \$400 | \$8,800 | \$560 | \$12,320 | \$560 | \$12,320 100.0% |
| Low Income Duct Sealing and Insulation | | | | | | 59 | 964 | 56,876 | 20.0 | \$0 | \$0 | \$126 | \$7,455 | \$126 | \$7,454 | \$126 | \$7,454 100.0% |
| Duct Sealing and Insulation | | | | | | 237 | 964 | 228,488 | 20.0 | \$0 | \$0 | \$100 | \$23,700 | \$153 | \$36,188 | \$153 | \$36,188 100.0% |
| Total | | | | | | 42,124 | 89 | 2,500,000 | 6.9 | \$3 | \$110,482 | \$126 | \$1,100 | \$128,758 | \$408 | \$189,182 | \$3.2% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Direct Install/Direct Install and Deep Retrofit Program Data Sheet

| | | | |
|-------------------------|---------------------------------------|------------------------------|-----------------------------------|
| Name: | 2022 Direct Install and Deep Retrofit | Last Updated: | 5/25/2021 20:05 |
| Customer Sector: | Residential | Avg Measure Life: | 6.68 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$648,193 | \$709,939 | (\$61,745) | 0.91 | \$0.080 |
| Total Resource Cost (TRC) | \$563,337 | \$709,939 | (\$146,602) | 0.79 | \$0.080 |
| Utility Cost Test (UCT) | \$563,337 | \$680,000 | (\$116,663) | 0.83 | \$0.076 |
| Participant Cost Test (PCT) | \$1,104,272 | \$93,733 | \$1,010,538 | 11.78 | \$0.010 |
| Ratepayer Impact (RIM) | \$563,337 | \$1,528,983 | (\$965,645) | 0.37 | \$0.171 |
| Societal Cost (SCT) | \$678,645 | \$709,939 | (\$31,293) | 0.96 | \$0.080 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$680,000 | \$0 | \$0 | \$680,000 |
| Electric Benefits (\$) | \$120,480 | \$0 | \$0 | \$563,337 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 1,828,388 | 0 | 0 | 12,209,007 |
| Critical Peak Hour Demand (kW) | 528 | 0 | 0 | 367 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 307,663 | 0 | 0 | 1,653,849 |
| Total On Peak Hours (%) | | | | 13.55% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.06% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 91.7% | | |

| | | | |
|-------------------------|---------------------------------------|------------------------------|-----------------------------------|
| Name: | 2023 Direct Install and Deep Retrofit | Last Updated: | 5/25/2021 20:14 |
| Customer Sector: | Residential | Avg Measure Life: | 7.30 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$831,943 | \$785,079 | \$46,864 | 1.06 | \$0.075 |
| Total Resource Cost (TRC) | \$723,032 | \$785,079 | (\$62,047) | 0.92 | \$0.075 |
| Utility Cost Test (UCT) | \$723,032 | \$740,001 | (\$16,969) | 0.98 | \$0.071 |
| Participant Cost Test (PCT) | \$1,279,892 | \$141,038 | \$1,138,854 | 9.07 | \$0.012 |
| Ratepayer Impact (RIM) | \$723,032 | \$1,736,117 | (\$1,013,085) | 0.42 | \$0.166 |
| Societal Cost (SCT) | \$869,404 | \$785,079 | \$84,325 | 1.11 | \$0.075 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$740,001 | \$0 | \$0 | \$740,001 |
| Electric Benefits (\$) | \$134,854 | \$0 | \$0 | \$723,032 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 2,007,981 | 0 | 0 | 14,651,811 |
| Critical Peak Hour Demand (kW) | 588 | 0 | 0 | 426 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 341,780 | 0 | 0 | 2,152,058 |
| Total On Peak Hours (%) | | | | 14.69% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.06% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 92.5% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Direct Install/Direct Install and Deep Retrofit Program Data Sheet

| | | | |
|-------------------------|---------------------------------------|------------------------------|-----------------------------------|
| Name: | 2024 Direct Install and Deep Retrofit | Last Updated: | 5/25/2021 20:21 |
| Customer Sector: | Residential | Avg Measure Life: | 7.76 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$1,016,472 | \$860,407 | \$156,066 | 1.18 | \$0.072 |
| Total Resource Cost (TRC) | \$883,404 | \$860,407 | \$22,998 | 1.03 | \$0.072 |
| Utility Cost Test (UCT) | \$883,404 | \$800,000 | \$83,405 | 1.10 | \$0.067 |
| Participant Cost Test (PCT) | \$1,453,611 | \$189,162 | \$1,264,450 | 7.68 | \$0.015 |
| Ratepayer Impact (RIM) | \$883,404 | \$1,931,890 | (\$1,048,486) | 0.46 | \$0.163 |
| Societal Cost (SCT) | \$1,060,568 | \$860,407 | \$200,162 | 1.23 | \$0.072 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$800,000 | \$0 | \$0 | \$800,000 |
| Electric Benefits (\$) | \$136,406 | \$0 | \$0 | \$883,404 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 2,183,422 | 0 | 0 | 16,934,501 |
| Critical Peak Hour Demand (kW) | 654 | 0 | 0 | 487 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 378,047 | 0 | 0 | 2,638,916 |
| Total On Peak Hours (%) | | | | 15.58% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | Secondary Benefits |
|---|--------------------|
| Discount Rate: | 7.14% |
| Rate Escalator: | 0.00% |
| Inflation Rate (T&D): | 2.00% |
| Line Loss (Energy): | 4.77% |
| Line Loss (Demand): | 9.93% |
| Avoided T&D Capacity \$/MW: | \$52,165 |
| Environmental Adder (SCT only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.06% |
| Electric Retail Rate (\$/KWh): | \$0.10 |
| Gas Retail Rate (\$/therm) | \$0.62 |
| Net-To-Gross Ratio | 93.2% |

| Scenarios: | |
|--------------------------|------|
| Measure Life | 100% |
| Energy Savings | 100% |
| Avoided Energy Cost | 100% |
| Avoided Capacity Cost | 100% |
| Incremental Measure Cost | 100% |

Sierra Input and Output Sheets

Sierra - Direct Install

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Net-to-Gross |
|---|---------------------------|---------------------|----------------------|-----------------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|--------------|
| Measures | \$86,117.15 | \$19,140 | \$52,103 | \$14,874 | | | | | | | |
| Air Filter/Furnace Filter | | | | | 557 | 56 | 31,117 | 0.5 | \$5 | \$2,523 | 85.0% |
| LED Lighting | | | | | 2,559 | 37 | 94,828 | 8.0 | \$2 | \$4,657 | 85.0% |
| Photocells | | | | | 43 | 24 | 1,032 | 8.0 | \$6 | \$271 | 85.0% |
| Refrigerator Thermometer | | | | | 363 | 6 | 2,226 | 3.0 | \$1 | \$367 | 85.0% |
| Air-conditioner Refrigerant Line Insulation | | | | | 39 | 7 | 254 | 10.0 | \$3 | \$114 | 85.0% |
| LED - Photocell Combo | | | | | 134 | 55 | 7,303 | 5.8 | \$5 | \$643 | 85.0% |
| Total | | | | | 3,695 | 37 | 136,760 | 6.2 | \$2 | \$8,576 | 85.0% |

| | | | |
|-------------------------|---------------------|------------------------------|----------------------------------|
| Name: | 2020 Direct Install | Last Updated: | 5/25/2021 18:58 |
| Customer Sector: | Residential | Avg Measure Life: | 6.10 |
| Region : | Reno | Energy Savings Curve: | Direct Installation |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$29,348 | \$86,117 | (\$56,769) | 0.34 | \$0.140 |
| Total Resource Cost (TRC) | \$25,516 | \$86,117 | (\$60,601) | 0.30 | \$0.140 |
| Utility Cost Test (UCT) | \$25,516 | \$86,117 | (\$60,601) | 0.30 | \$0.140 |
| Participant Cost Test (PCT) | \$69,046 | \$0 | \$69,046 | | \$0.000 |
| Ratepayer Impact (RIM) | \$25,516 | \$132,164 | (\$106,648) | 0.19 | \$0.215 |
| Societal Cost (SCT) | \$31,024 | \$86,117 | (\$55,094) | 0.36 | \$0.140 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|----------|------|------|---------------|
| Total Utility Investment (\$) | \$86,117 | \$0 | \$0 | \$86,117 |
| Electric Benefits (\$) | \$4,454 | \$0 | \$0 | \$25,516 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 124,062 | 0 | 0 | 756,576 |
| Critical Peak Hour Demand (kW) | 15 | 0 | 0 | 13 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 4,391 | 0 | 0 | 172,669 |
| Total On Peak Hours (%) | | | | 22.82% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | Secondary Benefits |
|---|--------------------|
| Discount Rate: | 6.75% |
| Rate Escalator: | 0.00% |
| Inflation Rate (T&D): | 2.00% |
| Line Loss (Energy): | 6.30% |
| Line Loss (Demand): | 14.31% |
| Avoided T&D Capacity \$/MW: | \$46,748 |
| Environmental Adder (SCT only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% |
| Electric Retail Rate (\$/KWh): | \$0.08 |
| Gas Retail Rate (\$/therm) | \$0.39 |
| Net-To-Gross Ratio | 85.0% |

| Scenarios: | |
|--------------------------|------|
| Measure Life | 100% |
| Energy Savings | 100% |
| Avoided Energy Cost | 100% |
| Avoided Capacity Cost | 100% |
| Incremental Measure Cost | 100% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Direct Install/Direct Install and Deep Retrofit Program Data Sheet

| | | | | | |
|--|------------------------|--------------------------|--------------------|---------------|-------------------|
| Name: | Direct Install Program | Last Updated: | 5/24/2021 | | |
| Customer Sector: | Residential | Avg Measure Life: | 6.10 | | |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:03 | | |
| Start Year: | 2020 | | | | |
| End Year: | 2020 | ACE guru™ Model | | | |
| Notes: | | | | | |
| | | | | | |
| | | | | | Cost of Conserved |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$29,348 | \$86,117 | (\$56,769) | 0.34 | \$0.114 |
| Total Resource Cost (TRC) | \$25,516 | \$86,117 | (\$60,601) | 0.30 | \$0.114 |
| Utility Cost Test (UCT) | \$25,516 | \$86,117 | (\$60,601) | 0.30 | \$0.114 |
| Participant Cost Test (PCT) | \$69,046 | \$0 | \$69,046 | | \$0.000 |
| Rate Payer Impact (RIM) | \$25,516 | \$134,872 | (\$109,356) | 0.19 | \$0.178 |
| Societal Cost (SCT) | \$31,024 | \$86,117 | (\$55,094) | 0.36 | \$0.114 |
| *Includes Rebates Paid to Freeriders | | | | | |
| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project | |
| Total Utility Investment (\$) | \$86,117 | \$0 | \$0 | \$86,117 | |
| Electric Benefit (\$) | \$3,947 | \$0 | \$0 | \$25,516 | |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 124,062 | 0 | 0 | 756,576 | |
| Critical Peak Hour Demand (kW) | 15 | 0 | 0 | 15 | |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 | |
| Total on Peak Hours (kWh) | 4,377 | 0 | 0 | 26,690 | |
| Total on Peak Hours (%) | | | | 3.53% | |
| *Savings in this Section are Adjusted for Line Loss and Net-to-Gross | | | | | |
| Financial Data | | | Secondary Benefits | | |
| Discount Rate | 6.75% | Other Savings | | \$0 | |
| Rate Escalator | 0.00% | | | | |
| Inflation Rate (T&D) | 2.00% | | | | |
| Line Loss (Energy) | 6.30% | Scenarios | | | |
| Line Loss (Demand) | 14.31% | Measure Life | | | |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Energy Savings | | | |
| Environmental Adder (SCT Only) | 10.00% | Avoided Energy Cost | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Avoided Capacity Cost | | | |
| Electric Retail Rate (\$/kWh) | \$0.08 | Incremental Measure Cost | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-to-Gross Ratio | 85.00% | | | | |

Sierra - Direct Install and Deep Retrofits

| 2022 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives: Rebates: | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Income Qualified Rebate / Incentives | Rebate / Incentives per unit | Total Rebates | Incremental Measure Cost per unit | Total Incremental Measure Cost | Net-to-Gross |
|---|---------------------------|---------------------|----------------------|----------------------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|--------------------------------------|------------------------------|---------------|-----------------------------------|--------------------------------|--------------|
| Measures | \$370,000 | \$73,207 | \$234,233 | \$45,517 | \$16,743 | | | | | | | | | | | |
| Air Filter/Furnace Filter | | | | | 4,345 | 56 | 242,735 | 0.5 | \$5 | \$19,683 | \$0 | \$0 | \$0 | \$0 | \$0 | 66.0% |
| LED Lighting | | | | | 9,476 | 37 | 351,149 | 8.0 | \$2 | \$17,246 | \$0 | \$0 | \$0 | \$0 | \$0 | 90.0% |
| Photo Cells | | | | | 40 | 24 | 960 | 8.0 | \$6 | \$252 | \$0 | \$0 | \$0 | \$0 | \$0 | 96.0% |
| Refrigerator Thermometer | | | | | 2,198 | 13 | 27,699 | 3.0 | \$1 | \$2,220 | \$0 | \$0 | \$0 | \$0 | \$0 | 95.0% |
| Air-conditioner Refrigerant Line Insulation | | | | | 15 | 43 | 644 | 10.0 | \$3 | \$44 | \$0 | \$0 | \$0 | \$0 | \$0 | 98.0% |
| LED - Photocell Combo | | | | | 491 | 55 | 26,760 | 5.8 | \$5 | \$2,357 | \$0 | \$0 | \$0 | \$0 | \$0 | 96.0% |
| Advanced Power Strip | | | | | 365 | 187 | 68,255 | 10.0 | \$11 | \$4,015 | \$0 | \$0 | \$0 | \$0 | \$0 | 90.0% |
| Air Sealing and Attic Insulation | | | | | 28 | 1,295 | 31,080 | 10.0 | \$0 | \$0 | \$600 | \$14,400 | \$900 | \$21,800 | \$1,800 | 100.0% |
| Ceiling Attic Insulation | | | | | 3 | 502 | 1,506 | 20.0 | \$0 | \$0 | \$0 | \$400 | \$1,200 | \$500 | \$1,680 | 100.0% |
| Low Income Duct Sealing and Insulation | | | | | 9 | 964 | 8,724 | 20.0 | \$0 | \$0 | \$125 | \$0 | \$1,143 | \$125 | \$1,143 | 100.0% |
| Duct Sealing and Insulation | | | | | 42 | 964 | 40,488 | 20.0 | \$0 | \$0 | \$0 | \$100 | \$4,200 | \$153 | \$5,413 | 100.0% |
| Total | | | | | 17,008 | 47 | 800,000 | 6.5 | \$3 | \$45,517 | \$126 | \$1,100 | \$20,943 | \$395 | \$30,836 | \$41.9% |

Sierra - Direct Install and Deep Retrofits

| 2023 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives: Rebates: | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Income Qualified Rebate / Incentives | Rebate / Incentives per unit | Total Rebates | Incremental Measure Cost per unit | Total Incremental Measure Cost | Net-to-Gross |
|---|---------------------------|---------------------|----------------------|----------------------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|--------------------------------------|------------------------------|---------------|-----------------------------------|--------------------------------|--------------|
| Measures | \$390,000 | \$77,164 | \$229,664 | \$40,580 | \$33,622 | | | | | | | | | | | |
| Air Filter/Furnace Filter | | | | | 4,820 | 56 | 269,271 | 0.5 | \$5 | \$21,835 | \$0 | \$0 | \$0 | \$0 | \$0 | 66.0% |
| LED Lighting | | | | | 9,943 | 37 | 368,454 | 8.0 | \$2 | \$18,096 | \$0 | \$0 | \$0 | \$0 | \$0 | 90.0% |
| Photo Cells | | | | | 35 | 24 | 840 | 8.0 | \$6 | \$221 | \$0 | \$0 | \$0 | \$0 | \$0 | 96.0% |
| Refrigerator Thermometer | | | | | 2,568 | 13 | 32,353 | 3.0 | \$1 | \$2,593 | \$0 | \$0 | \$0 | \$0 | \$0 | 95.0% |
| Air-conditioner Refrigerant Line Insulation | | | | | 23 | 7 | 150 | 10.0 | \$3 | \$67 | \$0 | \$0 | \$0 | \$0 | \$0 | 98.0% |
| LED - Photocell Combo | | | | | 510 | 55 | 27,795 | 5.8 | \$5 | \$2,448 | \$0 | \$0 | \$0 | \$0 | \$0 | 96.0% |
| LED Lighting | | | | | 390 | 187 | 72,930 | 10.0 | \$11 | \$4,290 | \$0 | \$0 | \$0 | \$0 | \$0 | 90.0% |
| Photo Cells | | | | | 39 | 1,295 | 50,505 | 10.0 | \$0 | \$0 | \$0 | \$600 | \$31,200 | \$900 | \$35,100 | 100.0% |
| Ceiling Attic Insulation | | | | | 5 | 502 | 2,510 | 20.0 | \$0 | \$0 | \$0 | \$400 | \$2,000 | \$500 | \$2,800 | 100.0% |
| Air-conditioner Refrigerant Line Insulation | | | | | 16 | 964 | 15,424 | 20.0 | \$0 | \$0 | \$125 | \$0 | \$2,022 | \$125 | \$2,021 | 100.0% |
| LED - Photocell Combo | | | | | 42 | 964 | 59,768 | 20.0 | \$0 | \$0 | \$0 | \$100 | \$6,200 | \$153 | \$9,467 | 100.0% |
| Total | | | | | 18,411 | 49 | 900,000 | 6.8 | \$3 | \$40,580 | \$126 | \$1,100 | \$33,622 | \$405 | \$49,388 | \$4.6% |

Sierra - Direct Install and Deep Retrofits

| 2024 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives: Rebates: | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Measure Cost per Unit | Total Measure Cost | Income Qualified Rebate / Incentives | Rebate / Incentives per unit | Total Rebates | Incremental Measure Cost per unit | Total Incremental Measure Cost | Net-to-Gross |
|---|---------------------------|---------------------|----------------------|----------------------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------|--------------------|--------------------------------------|------------------------------|---------------|-----------------------------------|--------------------------------|--------------|
| Measures | \$410,000 | \$81,121 | \$230,616 | \$82,783 | \$45,480 | | | | | | | | | | | |
| Air Filter/Furnace Filter | | | | | 4,901 | 56 | 273,796 | 0.5 | \$5 | \$22,202 | \$0 | \$0 | \$0 | \$0 | \$0 | 66.0% |
| LED Lighting | | | | | 10,740 | 37 | 397,989 | 8.0 | \$2 | \$19,547 | \$0 | \$0 | \$0 | \$0 | \$0 | 90.0% |
| Photo Cells | | | | | 25 | 24 | 600 | 8.0 | \$6 | \$158 | \$0 | \$0 | \$0 | \$0 | \$0 | 96.0% |
| Refrigerator Thermometer | | | | | 2,683 | 13 | 33,811 | 3.0 | \$1 | \$2,710 | \$0 | \$0 | \$0 | \$0 | \$0 | 95.0% |
| Air-conditioner Refrigerant Line Insulation | | | | | 25 | 7 | 160 | 10.0 | \$3 | \$72 | \$0 | \$0 | \$0 | \$0 | \$0 | 98.0% |
| LED - Photocell Combo | | | | | 575 | 55 | 31,338 | 5.8 | \$5 | \$2,760 | \$0 | \$0 | \$0 | \$0 | \$0 | 96.0% |
| LED Lighting | | | | | 485 | 187 | 90,695 | 10.0 | \$11 | \$5,335 | \$0 | \$0 | \$0 | \$0 | \$0 | 90.0% |
| Photo Cells | | | | | 52 | 1,295 | 67,340 | 10.0 | \$0 | \$0 | \$0 | \$600 | \$31,200 | \$900 | \$46,800 | 100.0% |
| Ceiling Attic Insulation | | | | | 8 | 502 | 4,016 | 20.0 | \$0 | \$0 | \$0 | \$400 | \$3,200 | \$500 | \$4,480 | 100.0% |
| Air-conditioner Refrigerant Line Insulation | | | | | 21 | 964 | 20,244 | 20.0 | \$0 | \$0 | \$125 | \$0 | \$2,653 | \$125 | \$2,653 | 100.0% |
| LED - Photocell Combo | | | | | 83 | 964 | 80,012 | 20.0 | \$0 | \$0 | \$0 | \$100 | \$8,300 | \$153 | \$12,673 | 100.0% |
| Total | | | | | 19,598 | 51 | 1,000,000 | 7.3 | \$3 | \$82,783 | \$126 | \$1,100 | \$45,353 | \$406 | \$66,606 | \$5.5% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Direct Install/Direct Install and Deep Retrofit Program Data Sheet

| | | | |
|-------------------------|---------------------------------------|------------------------------|----------------------------------|
| Name: | 2022 Direct Install and Deep Retrofit | Last Updated: | 5/25/2021 19:10 |
| Customer Sector: | Residential | Avg Measure Life: | 7.12 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$243,216 | \$384,093 | (\$140,877) | 0.63 | \$0.100 |
| Total Resource Cost (TRC) | \$211,462 | \$384,093 | (\$172,631) | 0.55 | \$0.100 |
| Utility Cost Test (UCT) | \$211,462 | \$374,200 | (\$162,738) | 0.57 | \$0.097 |
| Participant Cost Test (PCT) | \$382,144 | \$30,836 | \$351,308 | 12.39 | \$0.007 |
| Ratepayer Impact (RIM) | \$211,462 | \$663,293 | (\$451,831) | 0.32 | \$0.172 |
| Societal Cost (SCT) | \$256,119 | \$384,093 | (\$127,974) | 0.67 | \$0.100 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$374,200 | \$0 | \$0 | \$374,200 |
| Electric Benefits (\$) | \$38,322 | \$0 | \$0 | \$211,462 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 718,274 | 0 | 0 | 5,111,479 |
| Critical Peak Hour Demand (kW) | 153 | 0 | 0 | 115 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 33,619 | 0 | 0 | 1,109,246 |
| Total On Peak Hours (%) | | | | 21.70% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 91.7% | | |

| | | | |
|-------------------------|---------------------------------------|------------------------------|----------------------------------|
| Name: | 2023 Direct Install and Deep Retrofit | Last Updated: | 5/25/2021 19:18 |
| Customer Sector: | Residential | Avg Measure Life: | 7.50 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$306,027 | \$405,766 | (\$99,739) | 0.75 | \$0.090 |
| Total Resource Cost (TRC) | \$266,072 | \$405,766 | (\$139,694) | 0.66 | \$0.090 |
| Utility Cost Test (UCT) | \$266,072 | \$390,000 | (\$123,927) | 0.68 | \$0.086 |
| Participant Cost Test (PCT) | \$449,146 | \$49,388 | \$399,757 | 9.09 | \$0.010 |
| Ratepayer Impact (RIM) | \$266,072 | \$728,087 | (\$462,014) | 0.37 | \$0.161 |
| Societal Cost (SCT) | \$321,908 | \$405,766 | (\$83,858) | 0.79 | \$0.090 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$390,000 | \$0 | \$0 | \$390,000 |
| Electric Benefits (\$) | \$44,170 | \$0 | \$0 | \$266,072 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 812,747 | 0 | 0 | 6,096,135 |
| Critical Peak Hour Demand (kW) | 177 | 0 | 0 | 136 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 38,684 | 0 | 0 | 1,281,632 |
| Total On Peak Hours (%) | | | | 21.02% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 92.4% | | |

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Direct Install/Direct Install and Deep Retrofit Program Data Sheet

| | | | |
|-------------------------|---------------------------------------|------------------------------|----------------------------------|
| Name: | 2024 Direct Install and Deep Retrofit | Last Updated: | 5/25/2021 19:27 |
| Customer Sector: | Residential | Avg Measure Life: | 7.96 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$381,129 | \$431,126 | (\$49,997) | 0.88 | \$0.081 |
| Total Resource Cost (TRC) | \$331,369 | \$431,126 | (\$99,757) | 0.77 | \$0.081 |
| Utility Cost Test (UCT) | \$331,369 | \$409,873 | (\$78,504) | 0.81 | \$0.077 |
| Participant Cost Test (PCT) | \$526,631 | \$66,606 | \$460,024 | 7.91 | \$0.012 |
| Ratepayer Impact (RIM) | \$331,369 | \$807,752 | (\$476,383) | 0.41 | \$0.152 |
| Societal Cost (SCT) | \$400,707 | \$431,126 | (\$30,419) | 0.93 | \$0.081 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$409,873 | \$0 | \$0 | \$409,873 |
| Electric Benefits (\$) | \$45,724 | \$0 | \$0 | \$331,369 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 912,561 | 0 | 0 | 7,265,726 |
| Critical Peak Hour Demand (kW) | 197 | 0 | 0 | 155 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 43,270 | 0 | 0 | 1,504,533 |
| Total On Peak Hours (%) | | | | 20.71% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 92.9% | | |

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Residential DR – Build and Manage Programs Data Sheet**

2020-2024 Residential DR – Build and Manage Programs

Description

The Residential DR program (“Program”) goal is to recruit customers into an ongoing effort that allows NV Energy to interact with their air conditioners or end-use loads during times of peak energy use. The Program targets all NV Energy residential customers to reduce their energy consumption and demand requirements to save both energy and money. The Program conducts enrollment through customer service representatives via phone or email communication. Additionally, there is an option to enroll through a portal on NV Energy’s website, which aligns with the PowerShift branding. The program is split into two categories, Build and Manage. The Build component recruits residential customers into an ongoing service that allows DR smart technology to interact with customers’ AC or HVAC system end-use loads, during peak or emergency conditions to reduce demand requirements. The Manage component consists of customers that were recruited into the Build Program in previous years.

The Program customer requirements to participate are:

- Reside in NV Energy’s service territory,
- Have an active utility account,
- Have a working central AC unit,
- Have always-on internet service,
- Be at least 18 years old,
- Sign a participation agreement that allows NV Energy to increase their thermostat set point by a maximum of four degrees during a community energy event (“Event”), and
- Confirm permission with the property owner to install any permanent devices to the residence or HVAC system if the customer is a renter.

The Program is activated during the following conditions:

- For the months of June through September, when NV Energy anticipates the electric delivery system will reach peak system load, an Event is issued that sends a signal to increase customers’ thermostat set points and curtails their AC usage, typically for two hours.
- When emergency conditions exist, NV Energy initiates an Event to curtail customer usage to aid in grid reliability and shed system load requirements.

The Program assists NV Energy to reduce peak demand requirements and, in return, customers receive programmable thermostats to help them save energy and earn bill credits when they

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Residential DR – Build and Manage Programs Data Sheet

participate in Events. For the legacy Cool Share program, participants also receive device credits for the number of active thermostats during the DR season.

2020 Results

The expenditures, demand and energy savings, and participant results for the Program for the 2020 program year are provided in Table DSM-51 below.

Table DSM-51: 2020 Residential DR Expenditures, Savings, and Participants Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|--------------------------------------|---------------------|---------------------|-------------------------|-------------------|-------------------|-------------------------|----------------|----------------|-------------------------|---------------|---------------|-------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Annual Savings | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Residential Demand Response - Manage | \$6,000,000 | \$5,460,754 | (9.0%) | 21,428,571 | 17,938,697 | (16.3%) | 140,180 | 145,617 | 3.9% | 67,121 | 62,450 | (7.0%) |
| Residential Demand Response - Build | \$4,400,000 | \$3,360,364 | (23.6%) | 3,142,857 | 745,643 | (76.3%) | 11,493 | 5,305 | (53.8%) | 4,600 | 2,077 | (54.8%) |
| Nevada Power Total | \$10,400,000 | \$8,821,119 | (15.2%) | 24,571,429 | 18,684,340 | (24.0%) | 151,673 | 150,922 | (0.5%) | 71,721 | 64,527 | (10.0%) |
| Sierra | | | | | | | | | | | | |
| Residential Demand Response - Manage | \$750,000 | \$619,335 | (17.4%) | 1,500,000 | 697,500 | (53.5%) | 12,026 | 12,251 | 1.9% | 10,031 | 9,133 | (9.0%) |
| Residential Demand Response - Build | \$1,600,000 | \$1,039,229 | (35.0%) | 401,003 | 131,871 | (67.1%) | 2,518 | 1,244 | (50.6%) | 1,600 | 757 | (52.7%) |
| Sierra Total | \$2,350,000 | \$1,658,564 | (29.4%) | 1,901,003 | 829,371 | (56.4%) | 14,544 | 13,495 | (7.2%) | 11,631 | 9,890 | (15.0%) |
| NV Energy | | | | | | | | | | | | |
| Residential Demand Response - Manage | \$6,750,000 | \$6,080,090 | (9.9%) | 22,928,571 | 18,636,197 | (18.7%) | 152,206 | 157,868 | 3.7% | \$77,152 | \$71,583 | (7.2%) |
| Residential Demand Response - Build | \$6,000,000 | \$4,399,593 | (26.7%) | 3,543,860 | 877,514 | (75.2%) | 14,011 | 6,549 | (53.3%) | \$6,200 | \$2,834 | (54.3%) |
| NV Energy | \$12,750,000 | \$10,479,683 | (17.8%) | 26,472,431 | 19,513,711 | (26.3%) | 166,217 | 164,417 | (1.1%) | 83,352 | 74,417 | (10.7%) |

2020 Overall Results and Activities

Nevada Power had 64,527 premises that participated in 48 Events and Sierra had 9,890 premises that participated in 38 Events. Customer recruitment occurred through various communication and outreach channels including, but not limited to, NV Energy's website, media, direct customer emails, direct mail campaigns, and community outreach events.

COVID-19 was a major factor that contributed to the Build Program's performance. Safety precautions and restrictions were put in place which resulted in the suspension of DSM in-home services from mid-March through the end of June 2020. Once the restrictions on in-home services

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were lifted, the Program's field services team applied rigorous safety and health protocols to protect both the customer and the team. However, some customers, remained reluctant to allow entry into their home which slowed new enrollments into the Program.

The bundling of services, which included a smart thermostat installation, home energy assessment and the direct install of energy saving measures, aided in the Program's customer participation. In addition, it increased cost savings for the programs involved, making them more cost-effective. Customer satisfaction also increased, as customers were able to get all of these services in one appointment.

Since the number of new enrollments in the Program was limited due to the COVID restrictions, the Nevada Power and Sierra Pacific budgets were reduced to compensate. This translated into a reduction in energy savings and load reduction in the respective Build Programs. Nevada Power Program budgets were reduced by 10 percent and the Sierra Pacific Program budgets were reduced by 19 percent.

During 2020, the Program made several adjustments and improvements:

- The Program standardized bundling of DSM services for both new installations as well as repair/upgrades, which improved overall cost-effectiveness.
- The Program developed online customer agreements with digital signatures for both the NV Energy website and field service applications. Digital signatures for customer agreements would streamline the installation process and removed the need to scan documents.
- Due to COVID-19 safety precautions, in-home DSM services were suspended from mid-March through the end of June. In-home services were restored after the Program field services personnel applied rigorous safety and sanitary processes to protect both the customer and the field services personnel.

2020 Lessons Learned and Recommendations

The following lessons learned, or recommendations identified for consideration in an upcoming program year:

- More extensive bundling of DSM services to include smart thermostat installation without the need of an in-home energy assessment needs to be implemented to further improve the cost-effectiveness for field service installations, repairs, and upgrades. These have been applied to the 2021 Program year.
- The Program is continuing development of online customer agreements with digital signatures for the customer self-install process. Digital signatures for these customer agreements provide the processes necessary to ensure the customer installs the thermostats in a timely manner. These have been applied to the 2021 Program year.

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- Reinforcement training for customer service and field service personnel needs to be improved to ensure single truck rolls for field service installations, repairs, and upgrades.
- The program identified the need for virtual interactions with customers and will attempt to secure mobile and web-based services for a virtual customer interaction tool.

2021 Plan

The authorized budgets, projected demand and energy savings targets, and participant goals for the Program for the 2021 program year are provided in Table DSM-52 below.

Table DSM-52: 2021 Residential DR Authorized Budgets, Savings Targets, and Participant Goals

| 2021 Program Components | Authorized Budget Goal | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------------|-------------------------------|--|---|-------------------------|
| Nevada Power | | | | |
| Residential Demand Response - Manage | \$6,000,000 | 151,673 | 23,000,000 | 71,728 |
| Residential Demand Response - Build | \$4,000,000 | 11,493 | 3,000,000 | 7,300 |
| Nevada Power Total | \$10,000,000 | 163,166 | 26,000,000 | 79,028 |
| Sierra | | | | |
| Residential Demand Response - Manage | \$750,000 | 14,544 | 2,500,000 | 11,656 |
| Residential Demand Response - Build | \$1,400,000 | 4,600 | 500,000 | 3,000 |
| Sierra Total | \$2,150,000 | 19,144 | 3,000,000 | 14,656 |
| NV Energy | | | | |
| Residential Demand Response - Manage | \$6,750,000 | 166,217 | 25,500,000 | 83,384 |
| Residential Demand Response - Build | \$5,400,000 | 16,093 | 3,500,000 | 10,300 |
| NV Energy | \$12,150,000 | 182,310 | 29,000,000 | 93,684 |

The 2021 Program utilizes multiple thermostat technologies and focuses resources on bundled enrollments to optimize cost.

2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year:

- The Program is working on incorporating Bring Your Own Device (“BYOD”) for enrolling customers who have already purchased or installed demand response curtailment qualified devices.

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- In-home installation activity may be limited due to ongoing social distancing protocols. To combat this, the Program updated the customer self-install process to provide ease of install as well as ensuring the Program-provided thermostats are installed in a timely manner.
- Bundling of DSM services with smart thermostat installation and direct install measures will be implemented for the 2021 Program year.
- The Program developed digitally signed customer agreements for the customer self-install process. This should bolster the new enrollments into the Program and provide significant implementation cost savings.
- Reinforcement training for customer service and field service personnel needs to be improved to ensure single truck rolls for field service installations, repairs, and upgrades.

2022-2024 Proposed Plans

The proposed budget, projected demand and energy savings, and participant goals for the Program for the 2022 through 2024 program years are provided in Tables DSM-53 below.

Table DSM-53: 2022–2024 Residential DR Proposed Budgets, Savings Targets, and Participant Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------------|---------------------|-----------------------------------|------------------------------------|------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Residential Demand Response - Manage | \$7,100,000 | 172,000 | 22,000,000 | 103,000 |
| Residential Demand Response - Build | \$7,900,000 | 23,000 | 3,900,000 | 13,900 |
| Nevada Power Total | \$15,000,000 | 195,000 | 25,900,000 | 116,900 |
| Sierra | | | | |
| Residential Demand Response - Manage | \$750,000 | 12,251 | 1,550,000 | 16,100 |
| Residential Demand Response - Build | \$2,000,000 | 3,000 | 700,000 | 2,700 |
| Sierra Total | \$2,750,000 | 15,251 | 2,250,000 | 18,800 |
| NV Energy Combined | | | | |
| Residential Demand Response - Manage | \$7,850,000 | 184,251 | 23,550,000 | 119,100 |
| Residential Demand Response - Build | \$9,900,000 | 26,000 | 4,600,000 | 16,600 |
| NV Energy | \$17,750,000 | 210,251 | 28,150,000 | 135,700 |
| 2023 | | | | |
| Nevada Power | | | | |
| Residential Demand Response - Manage | \$7,800,000 | 185,000 | 24,800,000 | 117,000 |
| Residential Demand Response - Build | \$7,900,000 | 23,000 | 4,100,000 | 13,900 |
| Nevada Power Total | \$15,700,000 | 208,000 | 28,900,000 | 130,900 |
| Sierra | | | | |
| Residential Demand Response - Manage | \$800,000 | 13,000 | 2,150,000 | 18,700 |
| Residential Demand Response - Build | \$2,000,000 | 3,000 | 700,000 | 2,700 |
| Sierra Total | \$2,800,000 | 16,000 | 2,850,000 | 21,400 |
| NV Energy Combined | | | | |
| Residential Demand Response - Manage | \$8,600,000 | 198,000 | 26,950,000 | 135,700 |
| Residential Demand Response - Build | \$9,900,000 | 26,000 | 4,800,000 | 16,600 |
| NV Energy | \$18,500,000 | 224,000 | 31,750,000 | 152,300 |

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| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------------|---------------------|-----------------------------------|------------------------------------|------------------|
| 2024 | | | | |
| Nevada Power | | | | |
| Residential Demand Response - Manage | \$8,600,000 | 198,000 | 26,900,000 | 131,000 |
| Residential Demand Response - Build | \$7,900,000 | 23,000 | 4,300,000 | 13,900 |
| Nevada Power Total | \$16,500,000 | 221,000 | 31,200,000 | 144,900 |
| Sierra | | | | |
| Residential Demand Response - Manage | \$900,000 | 13,000 | 2,660,000 | 21,400 |
| Residential Demand Response - Build | \$2,000,000 | 3,000 | 700,000 | 2,700 |
| Sierra Total | \$2,900,000 | 16,000 | 3,360,000 | 24,100 |
| NV Energy Combined | | | | |
| Residential Demand Response - Manage | \$9,500,000 | 211,000 | 29,560,000 | 152,400 |
| Residential Demand Response - Build | \$9,900,000 | 26,000 | 5,000,000 | 16,600 |
| NV Energy | \$19,400,000 | 237,000 | 34,560,000 | 169,000 |

NV Energy requests approval for the Program for years 2022 through 2024 at the budgets and targets provided above.

Based on previous years, the Program focuses on DR load reduction and energy savings. This is accomplished using smart thermostats to manage AC loads for the purposes of DR load reduction and energy savings. Additionally, the program plan is being updated with newer technologies and measures outlined in the 2022 through 2024 Proposed Plan Enhancements, below. The Program promotes and provides materials, installation, and repairs at no cost to the customer for these technologies.

2022-2024 Proposed Plan Enhancements

The following are the Program plan enhancements for implementation during the 2022 through 2024 program years:

- Residential Electric Vehicle Charging for DR: Residential EV charging provides a unique opportunity to provide DR resources as well as utilizing EV discharging as a DER to bolster the grid. While EV charging is usually accounted for with Time of Use (“TOU”) rates, providing rate controls to defer energy usage to non-critical times, there exists a population of customers with residential EV charging that are not on a TOU rate. These customers, as well as NV Energy utilizing its owned DERMS, will provide EV discharging as a supply resource during peak usage times. The 2021 Clean Energy Plan provides an on-going pathway for residential EVs adoption and leveraging them for year-around DR.
- Residential Energy Storage for Demand Response: Working hand-in-hand with EV charging/discharging, residential energy storage provides DR resources that include limiting or deferring battery charging during DR events and also utilizing the aforementioned DERMS to discharge these batteries, either to the home or to the grid to either remove load or add DERs to the grid, respectively. The 2021 Clean Energy Plan provides an on-going pathway for residential energy storage adoption and, as with EV charging, leveraging them for additional year-around DR.

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- Demand Responsive Grid Interactive Appliances: DR responsive appliances provide cost-effective entries into year-around DR. As the initial offerings, Grid Interactive (“GI”) water heaters and pool pumps can be dispatched as DR resources throughout the year. Other appliances such as electric stoves, microwave ovens, dishwashers, washing machines, and electric tumble dryers would be added as additional DR resources, creating a large pool of diverse DR resources. Both new construction as well as retrofit channels are utilized for adoption of these newer technologies.
- Building Management Systems for Multi-family: Emerging technology from Ecobee and other smart thermostat solutions provide an inexpensive method for providing smart thermostat solutions in managed multi-family housing. Similar to commercial building management systems (“BMS”), the Ecobee Smart Building technology allows housing administration to optimize energy savings, remote thermostat management to include scheduling, set-point limits, and even equipment alerts for filters and other HVAC issues.
- LoRa and Managed Internet Thermostats for Low-Income: Part of the issue with low-income households is the need for “always on” internet, which many homes do not have. LoRa is a long range, low frequency system of communication that can provide appliance level speeds of internet communications over a wide area. With supporting technologies such as smart thermostats, a small community could be provided with the demand reduction and energy savings without the need for individual home internet access.

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-11 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-11 and DSM-17, which are calculated by the third-party evaluator ADM.

Incremental Costs

There are no incremental costs to participants or out-of-pocket expenses to customers for this Program.

Incentives/Rebates

Incentives for participating residential customers include thermostats and related gateway hardware, installation and any software access fees. Customers also receive bill credits for energy savings achieved during DR events and those with legacy equipment are paid five dollars per thermostat for each month during the DR season. NV Energy is currently investigating the potential incentives for new technologies.

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Measure Life

The EUL used for DR Build is 10.0 years for Nevada Power and 10.0 years for Sierra. The EUL used for Nevada Power’s DR Manage is 5.3 years and for Sierra’s DR Manage is 7.3 years.

Measure Units

The units of measure for the Program are one kWh for potential energy savings and one kW for potential demand reduction.

Savings

The 2020 Nevada Power energy savings for DR Build is 745,643 kWh with a max load reduction capacity of 5,305 kW. For DR Manage, the verified energy savings are 17,938,697 kWh with a max load reduction capacity of 145,617 kW. The Sierra energy savings for DR Build are 131,871 kWh with a max load reduction capacity of 1,244 kW. For DR Manage, the energy savings are 697,500 kWh with a max load reduction capacity of 12,251 kW. The DR programs design and approach vary from a standard energy efficiency program. A participant is fully active once the thermostat is installed or connected, the Program then uses annual savings.

Financial Analysis

Financial assumptions are provided in Section 4 of the DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The DR Build Program has an overall cost effectiveness NTRC score for 2020 of 1.61 for Nevada Power and 1.18 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 2.49 for 2022, 2.55 for 2023, and 2.60 for 2024 for Nevada Power and for Sierra 1.39 for 2022, 1.34 for 2023, and 1.41 for 2024. The DR Manage Program has an overall cost effectiveness NTRC score for 2020 of 5.49 for Nevada Power and 3.57 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 5.16 for 2022, 5.16 for 2023, and 5.11 for 2024 for Nevada Power and for Sierra 3.15 for 2022, 2.82 for 2023, and 2.99 for 2024.

Nevada Power Residential DR Build Input and Output Sheets

Nevada Power - Residential Demand Response - Build

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/unit) | Effective Useful Life | Net-to-Gross |
|-------|---------------------------|---------------------|----------------------|------------|-----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|------------------------------------|-----------------------|--------------|
| Total | | | | | | | 3,212 | 2 | 5,305 | 232 | 745,643 | 12 | 10.0 | 100.0% |
| 2020 | \$3,360,364 | \$434,021 | \$2,810,009 | \$0 | \$116,335 | \$36 | | | | | | | | |
| 2021 | \$199,000 | \$22,000 | \$136,000 | | \$41,000 | \$13 | | | | | | | | |
| 2022 | \$199,000 | \$22,000 | \$136,000 | | \$41,000 | \$13 | | | | | | | | |
| 2023 | \$199,000 | \$22,000 | \$136,000 | | \$41,000 | \$13 | | | | | | | | |
| 2024 | \$199,000 | \$22,000 | \$136,000 | | \$41,000 | \$13 | | | | | | | | |
| 2025 | \$199,000 | \$22,000 | \$136,000 | | \$41,000 | \$13 | | | | | | | | |
| 2026 | \$199,000 | \$22,000 | \$136,000 | | \$41,000 | \$13 | | | | | | | | |
| 2027 | \$199,000 | \$22,000 | \$136,000 | | \$41,000 | \$13 | | | | | | | | |
| 2028 | \$199,000 | \$22,000 | \$136,000 | | \$41,000 | \$13 | | | | | | | | |
| 2029 | \$199,000 | \$22,000 | \$136,000 | | \$41,000 | \$13 | | | | | | | | |

*Units defined as an average device installed under the Nevada Power DR build program in 2020.

| | | | | |
|-------------------------|-------|----|-------|--|
| Device to premise ratio | 1.55 | \$ | 417 | Future Utility admin and M&V cost is based on the actual expenses in the residential manage program in 2020 on a \$/kW basis |
| Gas Savings (Therm) | 12.02 | \$ | 25.68 | Future Implementation cost is based on the actual expenses in the residential manage program in 2020 on a \$/kW basis |
| Weighted Ave % NRD | 10% | \$ | 7.65 | Future Rebates are based on the actual expenses in the residential manage program in 2020 on a \$/kW basis |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|---------------------------|------------------------------|-----------------------------------|
| Name: | 2020 DR Residential Build | Last Updated: | 5/25/2021 19:55 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Residential - Build |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2029 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$6,860,562 | \$4,267,334 | \$2,593,228 | 1.61 | \$0.729 |
| Total Resource Cost (TRC) | \$5,945,649 | \$4,267,334 | \$1,678,315 | 1.39 | \$0.729 |
| Utility Cost Test (UCT) | \$5,766,681 | \$4,649,117 | \$1,117,564 | 1.24 | \$0.794 |
| Participant Cost Test (PCT) | \$939,271 | \$0 | \$939,271 | | \$0.000 |
| Ratepayer Impact (RIM) | \$5,766,681 | \$5,206,605 | \$560,076 | 1.11 | \$0.889 |
| Societal Cost (SCT) | \$6,894,214 | \$4,267,334 | \$2,626,880 | 1.62 | \$0.729 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$3,360,368 | \$198,985 | \$198,985 | \$5,151,235 |
| Electric Benefits (\$) | \$709,362 | \$741,267 | \$744,664 | \$5,766,681 |
| Gas Benefits (\$) | \$23,937 | \$23,937 | \$23,937 | \$178,968 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 783,025 | 783,025 | 783,025 | 7,830,246 |
| Critical Peak Hour Demand (kW) | 5,891 | 5,891 | 5,891 | 5,891 |
| Gas Savings (therms) | 38,608 | 38,608 | 38,608 | 386,082 |
| Total On Peak Hours (kWh) | 531,757 | 531,757 | 531,757 | 5,258,661 |
| Total On Peak Hours (%) | | | | 67.16% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|----------------------|------------------------------|-----------------|
| Name: | Residential DR Build | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 10.00 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:52 |
| Start Year: | 2020 | | |
| End Year: | 2029 | | |

ACE guru™ Model

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$6,859,073 | \$4,267,334 | \$2,591,739 | 1.61 | \$0.545 |
| Total Resource Cost (TRC) | \$5,944,359 | \$4,267,334 | \$1,677,025 | 1.39 | \$0.545 |
| Utility Cost Test (UCT) | \$5,765,390 | \$4,649,209 | \$1,116,181 | 1.24 | \$0.594 |
| Participant Cost Test (PCT) | \$939,363 | \$0 | \$939,363 | | \$0.000 |
| Rate Payer Impact (RIM) | \$5,765,390 | \$5,206,697 | \$558,693 | 1.11 | \$0.665 |
| Societal Cost (SCT) | \$6,897,903 | \$4,267,334 | \$2,630,569 | 1.62 | \$0.545 |

*Includes Rebates Paid to Freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$3,360,364 | \$199,000 | \$199,000 | \$4,649,209 |
| Electric Benefit (\$) | \$709,202 | \$741,101 | \$744,498 | \$5,765,390 |
| Gas Benefit (\$) | \$23,907 | \$23,907 | \$23,907 | \$178,968 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 783,025 | 783,025 | 783,025 | 7,830,246 |
| Critical Peak Hour Demand (kW) | 5,890 | 5,890 | 5,890 | 5,890 |
| Gas Savings (Therms) | 38,608 | 38,608 | 38,608 | 386,082 |
| Total on Peak Hours (kWh) | 525,866 | 525,866 | 525,866 | 5,258,661 |
| Total on Peak Hours (%) | | | | 67.16% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | <u>Scenarios</u> | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-to-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

Nevada Power - Residential DR Build 2022

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|-----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|------------------------------------|-----------------------|----------------|
| Total | | | | | | | 13,900 | 2 | 23,000 | 281 | 3,900,000 | 12 | 10.0 | 100.0% |
| 2022 | \$7,900,000 | \$1,147,617 | \$6,587,090 | \$0 | \$165,293 | \$ 12 | | | | | | | | |
| 2023 | \$950,000 | \$123,000 | \$625,000 | | \$202,000 | \$ 15 | | | | | | | | |
| 2024 | \$950,000 | \$123,000 | \$625,000 | | \$202,000 | \$ 15 | | | | | | | | |
| 2025 | \$950,000 | \$123,000 | \$625,000 | | \$202,000 | \$ 15 | | | | | | | | |
| 2026 | \$950,000 | \$123,000 | \$625,000 | | \$202,000 | \$ 15 | | | | | | | | |
| 2027 | \$950,000 | \$123,000 | \$625,000 | | \$202,000 | \$ 15 | | | | | | | | |
| 2028 | \$950,000 | \$123,000 | \$625,000 | | \$202,000 | \$ 15 | | | | | | | | |
| 2029 | \$950,000 | \$123,000 | \$625,000 | | \$202,000 | \$ 15 | | | | | | | | |
| 2030 | \$950,000 | \$123,000 | \$625,000 | | \$202,000 | \$ 15 | | | | | | | | |
| 2031 | \$950,000 | \$123,000 | \$625,000 | | \$202,000 | \$ 15 | | | | | | | | |

*Unit is defined as an average device installed under the Nevada Power DR build program in 2022.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.95 for DR kWh and the per unit annual kWh savings are adjusted by the 0.95 NTG rate.

Devise to premise ratio 1.56 \$ 5.34 Future Utility admin and M&V cost is based on the actual expenses in the residential manage program in 2022 on a \$/kW basis
Gas Savings (Therm) 11.96 \$ 27.17 Future Implementation cost is based on the actual expenses in the residential manage program in 2022 on a \$/kW basis
Weighted Ave % NRD 12% \$ 8.77 Future Rebates are based on the actual expenses in the residential manage program in 2022 on a \$/kW basis

Nevada Power - Residential DR Build 2023

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|-----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|------------------------------------|-----------------------|----------------|
| Total | | | | | | | 13,900 | 2 | 23,000 | 295 | 4,100,000 | 12 | 10.0 | 100.0% |
| 2023 | \$7,900,000 | \$1,147,617 | \$6,587,090 | \$0 | \$165,293 | \$ 12 | | | | | | | | |
| 2024 | \$969,000 | \$125,000 | \$638,000 | | \$206,000 | \$ 15 | | | | | | | | |
| 2025 | \$969,000 | \$125,000 | \$638,000 | | \$206,000 | \$ 15 | | | | | | | | |
| 2026 | \$969,000 | \$125,000 | \$638,000 | | \$206,000 | \$ 15 | | | | | | | | |
| 2027 | \$969,000 | \$125,000 | \$638,000 | | \$206,000 | \$ 15 | | | | | | | | |
| 2028 | \$969,000 | \$125,000 | \$638,000 | | \$206,000 | \$ 15 | | | | | | | | |
| 2029 | \$969,000 | \$125,000 | \$638,000 | | \$206,000 | \$ 15 | | | | | | | | |
| 2030 | \$969,000 | \$125,000 | \$638,000 | | \$206,000 | \$ 15 | | | | | | | | |
| 2031 | \$969,000 | \$125,000 | \$638,000 | | \$206,000 | \$ 15 | | | | | | | | |
| 2032 | \$969,000 | \$125,000 | \$638,000 | | \$206,000 | \$ 15 | | | | | | | | |

*Unit is defined as an average device installed under the Nevada Power DR build program in 2023.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.95 for DR kWh and the per unit annual kWh savings are adjusted by the 0.95 NTG rate.

Devise to premise ratio 1.56 \$ 5.46 Future Utility admin and M&V cost is based on the actual expenses in the residential manage program in 2023 on a \$/kW basis
Gas Savings (Therm) 11.96 \$ 27.75 Future Implementation cost is based on the actual expenses in the residential manage program in 2023 on a \$/kW basis
Weighted Ave % NRD 12% \$ 8.95 Future Rebates are based on the actual expenses in the residential manage program in 2023 on a \$/kW basis

Nevada Power - Residential DR Build 2024

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|-----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|------------------------------------|-----------------------|----------------|
| Total | | | | | | | 13,900 | 2 | 23,000 | 309 | 4,300,000 | 12 | 10.0 | 100.0% |
| 2024 | \$7,900,000 | \$1,147,617 | \$6,587,090 | \$0 | \$165,293 | \$ 12 | | | | | | | | |
| 2025 | \$999,000 | \$129,000 | \$658,000 | | \$212,000 | \$ 15 | | | | | | | | |
| 2026 | \$999,000 | \$129,000 | \$658,000 | | \$212,000 | \$ 15 | | | | | | | | |
| 2027 | \$999,000 | \$129,000 | \$658,000 | | \$212,000 | \$ 15 | | | | | | | | |
| 2028 | \$999,000 | \$129,000 | \$658,000 | | \$212,000 | \$ 15 | | | | | | | | |
| 2029 | \$999,000 | \$129,000 | \$658,000 | | \$212,000 | \$ 15 | | | | | | | | |
| 2030 | \$999,000 | \$129,000 | \$658,000 | | \$212,000 | \$ 15 | | | | | | | | |
| 2031 | \$999,000 | \$129,000 | \$658,000 | | \$212,000 | \$ 15 | | | | | | | | |
| 2032 | \$999,000 | \$129,000 | \$658,000 | | \$212,000 | \$ 15 | | | | | | | | |
| 2033 | \$999,000 | \$129,000 | \$658,000 | | \$212,000 | \$ 15 | | | | | | | | |

*Unit is defined as an average device installed under the Nevada Power DR build program in 2024.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.95 for DR kWh and the per unit annual kWh savings are adjusted by the 0.95 NTG rate.

Devise to premise ratio 1.56 \$ 5.62 Future Utility admin and M&V cost is based on the actual expenses in the residential manage program in 2024 on a \$/kW basis
Gas Savings (Therm) 11.96 \$ 28.59 Future Implementation cost is based on the actual expenses in the residential manage program in 2024 on a \$/kW basis
Weighted Ave % NRD 12% \$ 9.23 Future Rebates are based on the actual expenses in the residential manage program in 2024 on a \$/kW basis

Nevada Power Companies d/b/a as NV Energy

Sierra Pacific Power Companies d/b/a NV Energy

Residential DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|---------------------------|------------------------------|-----------------------------------|
| Name: | 2022 DR Residential Build | Last Updated: | 5/25/2021 20:06 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Residential - Build |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2031 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$31,284,841 | \$12,579,209 | \$18,705,632 | 2.49 | \$0.433 |
| Total Resource Cost (TRC) | \$27,112,749 | \$12,579,209 | \$14,533,540 | 2.16 | \$0.433 |
| Utility Cost Test (UCT) | \$26,342,126 | \$14,052,541 | \$12,289,585 | 1.87 | \$0.483 |
| Participant Cost Test (PCT) | \$4,242,929 | \$0 | \$4,242,929 | | \$0.000 |
| Ratepayer Impact (RIM) | \$26,342,126 | \$16,822,138 | \$9,519,988 | 1.57 | \$0.578 |
| Societal Cost (SCT) | \$31,446,598 | \$12,579,209 | \$18,867,389 | 2.50 | \$0.433 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$7,899,978 | \$949,967 | \$949,967 | \$16,449,681 |
| Electric Benefits (\$) | \$3,241,787 | \$3,283,725 | \$3,219,072 | \$26,342,126 |
| Gas Benefits (\$) | \$103,071 | \$103,071 | \$103,071 | \$770,623 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 3,890,062 | 3,890,062 | 3,890,062 | 38,900,615 |
| Critical Peak Hour Demand (kW) | 25,536 | 25,536 | 25,536 | 25,536 |
| Gas Savings (therms) | 166,244 | 166,244 | 166,244 | 1,662,440 |
| Total On Peak Hours (kWh) | 2,638,035 | 2,638,035 | 2,638,035 | 26,124,997 |
| Total On Peak Hours (%) | | | | 67.16% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|---------------------------|------------------------------|-----------------------------------|
| Name: | 2023 DR Residential Build | Last Updated: | 5/25/2021 20:14 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Residential - Build |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2032 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$32,272,480 | \$12,676,358 | \$19,596,122 | 2.55 | \$0.415 |
| Total Resource Cost (TRC) | \$27,968,679 | \$12,676,358 | \$15,292,321 | 2.21 | \$0.415 |
| Utility Cost Test (UCT) | \$27,198,056 | \$14,175,797 | \$13,022,258 | 1.92 | \$0.464 |
| Participant Cost Test (PCT) | \$4,411,413 | \$0 | \$4,411,413 | | \$0.000 |
| Ratepayer Impact (RIM) | \$27,198,056 | \$17,087,772 | \$10,110,284 | 1.59 | \$0.559 |
| Societal Cost (SCT) | \$32,440,898 | \$12,676,358 | \$19,764,540 | 2.56 | \$0.415 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$7,899,978 | \$968,998 | \$968,998 | \$16,620,960 |
| Electric Benefits (\$) | \$3,289,522 | \$3,222,382 | \$3,396,982 | \$27,198,056 |
| Gas Benefits (\$) | \$103,071 | \$103,071 | \$103,071 | \$770,623 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 4,090,039 | 4,090,039 | 4,090,039 | 40,900,386 |
| Critical Peak Hour Demand (kW) | 25,536 | 25,536 | 25,536 | 25,536 |
| Gas Savings (therms) | 166,244 | 166,244 | 166,244 | 1,662,440 |
| Total On Peak Hours (kWh) | 2,772,337 | 2,772,337 | 2,772,337 | 27,468,009 |
| Total On Peak Hours (%) | | | | 67.16% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | | | |
|--|---------------------------|--------------------------|-----------------------------------|---------------|-----------------------------------|
| Name: | 2024 DR Residential Build | Last Updated: | 5/25/2021 20:21 | | |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 | | |
| Region : | Vegas | Energy Savings Curve: | DR Residential - Build | | |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm | | |
| End Year: | 2033 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx | | |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx | | |
| | | | | | |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$33,379,323 | \$12,831,797 | \$20,547,527 | 2.60 | \$0.400 |
| Total Resource Cost (TRC) | \$28,927,916 | \$12,831,797 | \$16,096,119 | 2.25 | \$0.400 |
| Utility Cost Test (UCT) | \$28,157,292 | \$14,369,947 | \$13,787,345 | 1.96 | \$0.448 |
| Participant Cost Test (PCT) | \$4,592,501 | \$0 | \$4,592,501 | | \$0.000 |
| Ratepayer Impact (RIM) | \$28,157,292 | \$17,424,298 | \$10,732,994 | 1.62 | \$0.543 |
| Societal Cost (SCT) | \$33,554,856 | \$12,831,797 | \$20,723,059 | 2.61 | \$0.400 |
| Includes rebates paid to free riders | | | | | |
| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project | |
| Total Utility Investment (\$) | \$7,899,978 | \$998,975 | \$998,975 | \$16,890,753 | |
| Electric Benefits (\$) | \$3,225,692 | \$3,402,328 | \$3,512,697 | \$28,157,292 | |
| Gas Benefits (\$) | \$103,071 | \$103,071 | \$103,071 | \$770,623 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 4,290,015 | 4,290,015 | 4,290,015 | 42,900,152 | |
| Critical Peak Hour Demand (kW) | 25,536 | 25,536 | 25,536 | 25,536 | |
| Gas Savings (therms) | 166,244 | 166,244 | 166,244 | 1,662,440 | |
| Total On Peak Hours (kWh) | 2,906,638 | 2,906,638 | 2,906,638 | 28,811,019 | |
| Total On Peak Hours (%) | | | | 67.16% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| Financial Data | | Secondary Benefits | | | |
| Discount Rate: | 7.14% | Other Savings | | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 4.77% | Scenarios: | | | |
| Line Loss (Demand): | 9.93% | Measure Life | | | |
| Avoided T&D Capacity \$/MW: | \$52,165 | Energy Savings | | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Energy Cost | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% | Avoided Capacity Cost | | | |
| Electric Retail Rate (\$/kWh): | \$0.10 | Incremental Measure Cost | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

Nevada Power Residential DR Manage Input and Output Sheets

Nevada Power - Residential Demand Response - Manage

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/unit) | Effective Useful Life | Net-to-Gross |
|-------|---------------------------|---------------------|----------------------|------------|-------------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|------------------------------------|-----------------------|--------------|
| Total | | | | | | \$12 | 93,142 | 2 | 145,617 | 193 | 17,938,697 | 8 | 5.3 | 100.0% |
| 2020 | \$5,460,754 | \$607,543 | \$3,738,839 | \$0 | \$1,114,372 | | | | | | | | | |
| 2021 | \$5,461,000 | \$608,000 | \$3,739,000 | | \$1,114,000 | | | | | | | | | |
| 2022 | \$5,461,000 | \$608,000 | \$3,739,000 | | \$1,114,000 | | | | | | | | | |
| 2023 | \$5,461,000 | \$608,000 | \$3,739,000 | | \$1,114,000 | | | | | | | | | |
| 2024 | \$5,461,000 | \$608,000 | \$3,739,000 | | \$1,114,000 | | | | | | | | | |

*Unit is defined as an average device managed under the Nevada Power DR manage program in 2020.

Device to premise ratio 1.49
Gas Savings (Therm) 8.21
Weighted Ave %NRD 14%

| | | | | | |
|---|----------------------------|------------------------------|-----------------------------------|----------------------|--|
| Name: | 2020 DR Residential Manage | Last Updated: | 5/25/2021 19:54 | | |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 | | |
| Region : | Vegas | Energy Savings Curve: | DR Residential - Manage | | |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm | | |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx | | |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx | | |
| | | | | | |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$104,449,844 | \$19,024,172 | \$85,425,672 | 5.49 | \$0.231 |
| Total Resource Cost (TRC) | \$90,520,596 | \$19,024,172 | \$71,496,424 | 4.76 | \$0.231 |
| Utility Cost Test (UCT) | \$88,445,632 | \$23,899,536 | \$64,546,096 | 3.70 | \$0.290 |
| Participant Cost Test (PCT) | \$12,726,294 | \$0 | \$12,726,294 | | \$0.000 |
| Ratepayer Impact (RIM) | \$88,445,632 | \$31,750,466 | \$56,695,166 | 2.79 | \$0.385 |
| Societal Cost (SCT) | \$104,883,800 | \$19,024,172 | \$85,859,627 | 5.51 | \$0.231 |
| <i>*Includes rebates paid to free riders</i> | | | | | |
| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project | |
| Total Utility Investment (\$) | \$5,460,360 | \$5,460,978 | \$5,460,978 | \$27,304,273 | |
| Electric Benefits (\$) | \$19,379,075 | \$20,286,161 | \$20,446,820 | \$88,445,632 | |
| Gas Benefits (\$) | \$474,111 | \$474,111 | \$474,111 | \$2,074,964 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 18,838,024 | 18,838,024 | 18,838,024 | 94,190,121 | |
| Critical Peak Hour Demand (kW) | 161,671 | 161,671 | 161,671 | 161,671 | |
| Gas Savings (therms) | 764,696 | 764,696 | 764,696 | 3,823,479 | |
| Total On Peak Hours (kWh) | 8,797,223 | 8,797,223 | 8,797,223 | 43,177,758 | |
| Total On Peak Hours (%) | | | | 45.84% | |
| <i>*Savings in this section are adjusted for line loss and net-to-gross</i> | | | | | |
| Financial Data | | Secondary Benefits | | | |
| Discount Rate: | 7.14% | Other Savings | | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | | | |
| Line Loss (Energy): | 4.77% | Measure Life | | 100% | |
| Line Loss (Demand): | 9.93% | Energy Savings | | 100% | |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | | 100% | |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% | Incremental Measure Cost | | 100% | |
| Electric Retail Rate (\$/kWh): | \$0.10 | | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | |
|------------------|-----------------------|-----------------------|-----------------|
| Name: | Residential DR Manage | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 5.00 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:52 |
| Start Year: | 2020 | | |
| End Year: | 2024 | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|--------------|-------------------|-------------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$104,413,539 | \$19,024,172 | \$85,389,367 | 5.49 | \$0.202 |
| Total Resource Cost (TRC) | \$90,489,133 | \$19,024,172 | \$71,464,961 | 4.76 | \$0.202 |
| Utility Cost Test (UCT) | \$88,414,169 | \$23,900,003 | \$64,514,166 | 3.70 | \$0.254 |
| Participant Cost Test (PCT) | \$12,726,761 | \$0 | \$12,726,761 | | \$0.000 |
| Rate Payer Impact (RIM) | \$88,414,169 | \$31,750,934 | \$56,663,235 | 2.78 | \$0.337 |
| Societal Cost (SCT) | \$104,910,638 | \$19,024,172 | \$85,886,466 | 5.51 | \$0.202 |

*Includes Rebates Paid to Freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|--------------|--------------|--------------|---------------|
| Total Utility Investment (\$) | \$5,460,754 | \$5,461,000 | \$5,461,000 | \$23,900,003 |
| Electric Benefit (\$) | \$19,361,318 | \$20,279,422 | \$20,437,530 | \$88,414,169 |
| Gas Benefit (\$) | \$473,515 | 473,515 | 473,515 | \$2,074,964 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 18,838,024 | 18,838,024 | 18,838,024 | 94,190,121 |
| Critical Peak Hour Demand (kW) | 161,671 | 161,671 | 161,671 | 161,671 |
| Gas Savings (Therms) | 764,696 | 764,696 | 764,696 | 3,823,479 |
| Total on Peak Hours (kWh) | 7,027,033 | 7,027,033 | 7,027,033 | 35,135,165 |
| Total on Peak Hours (%) | | | | 37.30% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | Secondary Benefits |
|---|--------------------------|
| Discount Rate | 7.14% |
| Rate Escalator | 0.00% |
| Inflation Rate (T&D) | 2.00% |
| Line Loss (Energy) | 4.77% |
| Line Loss (Demand) | 9.93% |
| Avoided T&D Capacity (\$/MW) | \$52,165 |
| Environmental Adder (SCT Only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% |
| Electric Retail Rate (\$/kWh) | \$0.10 |
| Gas Retail Rate (\$/therm) | \$0.62 |
| Net-to-Gross Ratio | 100.0% |
| | Other Savings |
| | \$0 |
| | Scenarios |
| | Measure Life |
| | 100% |
| | Energy Savings |
| | 100% |
| | Avoided Energy Cost |
| | 100% |
| | Avoided Capacity Cost |
| | 100% |
| | Incremental Measure Cost |
| | 100% |

Nevada Power - Residential DR Manage 2022

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/ unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|-------------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|-------------------------------------|-----------------------|----------------|
| Total | | | | | \$15 | | 103,000 | 2 | 172,000 | 214 | 22,000,000 | 9 | 4 | 100.0% |
| 2022 | \$7,100,000 | \$918,655 | \$4,673,368 | \$0 | \$1,507,977 | | | | | | | | | |
| 2023 | \$7,100,000 | \$919,000 | \$4,673,000 | | \$1,508,000 | | | | | | | | | |
| 2024 | \$7,100,000 | \$919,000 | \$4,673,000 | | \$1,508,000 | | | | | | | | | |
| 2025 | \$7,100,000 | \$919,000 | \$4,673,000 | | \$1,508,000 | | | | | | | | | |

*Unit is defined as an average device managed under the Nevada Power DR manage program in 2022.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.95 for DR kWh and the per unit annual kWh savings are adjusted by the 0.95 NTG rate.

Devise to premise ratio 1.50
Gas Savings (Therm) 8.58
Weighted Ave % NRD 14%

Nevada Power - Residential DR Manage 2023

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/ unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|-------------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|-------------------------------------|-----------------------|----------------|
| Total | | | | | \$14 | | 117,000 | 2 | 185,000 | 212 | 24,800,000 | 9 | 4 | 100.0% |
| 2023 | \$7,800,000 | \$1,009,227 | \$5,134,122 | \$0 | \$1,656,651 | | | | | | | | | |
| 2024 | \$7,800,000 | \$1,009,000 | \$5,134,000 | | \$1,657,000 | | | | | | | | | |
| 2025 | \$7,800,000 | \$1,009,000 | \$5,134,000 | | \$1,657,000 | | | | | | | | | |
| 2026 | \$7,800,000 | \$1,009,000 | \$5,134,000 | | \$1,657,000 | | | | | | | | | |

*Unit is defined as an average device managed under the Nevada Power DR manage program in 2023.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.95 for DR kWh and the per unit annual kWh savings are adjusted by the 0.95 NTG rate.

Devise to premise ratio 1.51
Gas Savings (Therm) 8.98
Weighted Ave % NRD 14%

Nevada Power - Residential DR Manage 2024

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/ unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|-------------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|-------------------------------------|-----------------------|----------------|
| Total | | | | | \$14 | | 131,000 | 2 | 198,000 | 205 | 26,900,000 | 9 | 4 | 100.0% |
| 2024 | \$8,600,000 | \$1,112,737 | \$5,660,699 | \$0 | \$1,826,564 | | | | | | | | | |
| 2025 | \$8,601,000 | \$1,113,000 | \$5,661,000 | | \$1,827,000 | | | | | | | | | |
| 2026 | \$8,601,000 | \$1,113,000 | \$5,661,000 | | \$1,827,000 | | | | | | | | | |
| 2027 | \$8,601,000 | \$1,113,000 | \$5,661,000 | | \$1,827,000 | | | | | | | | | |

*Unit is defined as an average device managed under the Nevada Power DR manage program in 2024.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.95 for DR kWh and the per unit annual kWh savings are adjusted by the 0.95 NTG rate.

Devise to premise ratio 1.52
Gas Savings (Therm) 9.30
Weighted Ave % NRD 13%

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|----------------------------|------------------------------|-----------------------------------|
| Name: | 2022 DR Residential Manage | Last Updated: | 5/25/2021 20:05 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Residential - Manage |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2025 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$104,391,411 | \$20,229,742 | \$84,161,669 | 5.16 | \$0.255 |
| Total Resource Cost (TRC) | \$90,469,956 | \$20,229,742 | \$70,240,214 | 4.47 | \$0.255 |
| Utility Cost Test (UCT) | \$88,487,795 | \$25,684,820 | \$62,802,975 | 3.45 | \$0.324 |
| Participant Cost Test (PCT) | \$13,015,429 | \$0 | \$13,015,429 | | \$0.000 |
| Ratepayer Impact (RIM) | \$88,487,795 | \$33,245,171 | \$55,242,624 | 2.66 | \$0.419 |
| Societal Cost (SCT) | \$104,828,764 | \$20,229,742 | \$84,599,022 | 5.18 | \$0.255 |
| *Includes rebates paid to freeriders | | | | | |

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--|--------------|--------------|--------------|----------------------|
| Total Utility Investment (\$) | \$7,099,943 | \$7,099,920 | \$7,099,920 | \$28,399,703 |
| Electric Benefits (\$) | \$24,141,386 | \$24,457,950 | \$24,080,772 | \$88,487,795 |
| Gas Benefits (\$) | \$547,919 | \$547,919 | \$547,919 | \$1,982,161 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 21,946,422 | 21,946,422 | 21,946,422 | 87,785,686 |
| Critical Peak Hour Demand (kW) | 190,963 | 190,963 | 190,963 | 190,963 |
| Gas Savings (therms) | 883,740 | 883,740 | 883,740 | 3,534,960 |
| Total On Peak Hours (kWh) | 10,251,437 | 10,251,437 | 10,251,437 | 40,241,897 |
| Total On Peak Hours (%) | | | | 45.84% |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | |

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|----------------------------|------------------------------|-----------------------------------|
| Name: | 2023 DR Residential Manage | Last Updated: | 5/25/2021 20:14 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Residential - Manage |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2026 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$114,731,367 | \$22,223,376 | \$92,507,991 | 5.16 | \$0.248 |
| Total Resource Cost (TRC) | \$99,430,993 | \$22,223,376 | \$77,207,618 | 4.47 | \$0.248 |
| Utility Cost Test (UCT) | \$97,074,444 | \$28,216,756 | \$68,857,688 | 3.44 | \$0.315 |
| Participant Cost Test (PCT) | \$14,517,862 | \$0 | \$14,517,862 | | \$0.000 |
| Ratepayer Impact (RIM) | \$97,074,444 | \$36,741,238 | \$60,333,206 | 2.64 | \$0.410 |
| Societal Cost (SCT) | \$115,233,390 | \$22,223,376 | \$93,010,015 | 5.19 | \$0.248 |
| *Includes rebates paid to freeriders | | | | | |

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--|--------------|--------------|--------------|----------------------|
| Total Utility Investment (\$) | \$7,800,069 | \$7,799,720 | \$7,799,720 | \$31,199,229 |
| Electric Benefits (\$) | \$26,345,200 | \$25,926,241 | \$27,205,974 | \$99,077,444 |
| Gas Benefits (\$) | \$651,409 | \$651,409 | \$651,409 | \$2,356,550 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 24,745,132 | 24,745,132 | 24,745,132 | 98,980,528 |
| Critical Peak Hour Demand (kW) | 205,396 | 205,396 | 205,396 | 205,396 |
| Gas Savings (therms) | 1,050,660 | 1,050,660 | 1,050,660 | 4,202,640 |
| Total On Peak Hours (kWh) | 11,548,829 | 11,548,829 | 11,548,829 | 45,373,732 |
| Total On Peak Hours (%) | | | | 45.84% |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | |

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|----------------------------|------------------------------|-----------------------------------|
| Name: | 2024 DR Residential Manage | Last Updated: | 5/25/2021 20:21 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Residential - Manage |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2027 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$125,104,575 | \$24,505,180 | \$100,599,395 | 5.11 | \$0.252 |
| Total Resource Cost (TRC) | \$108,420,848 | \$24,505,180 | \$83,915,669 | 4.42 | \$0.252 |
| Utility Cost Test (UCT) | \$105,688,295 | \$31,114,885 | \$74,573,410 | 3.40 | \$0.320 |
| Participant Cost Test (PCT) | \$15,855,650 | \$0 | \$15,855,650 | | \$0.000 |
| Ratepayer Impact (RIM) | \$105,688,295 | \$40,360,830 | \$65,327,466 | 2.62 | \$0.416 |
| Societal Cost (SCT) | \$125,663,894 | \$24,505,180 | \$101,158,715 | 5.13 | \$0.252 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project |
|--------------------------------------|--------------|--------------|--------------|----------------------|
| Total Utility Investment (\$) | \$8,599,576 | \$8,601,450 | \$8,601,450 | \$34,403,926 |
| Electric Benefits (\$) | \$27,756,007 | \$29,128,690 | \$30,062,192 | \$105,688,295 |
| Gas Benefits (\$) | \$755,346 | \$755,346 | \$755,346 | \$2,732,553 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 26,839,414 | 26,839,414 | 26,839,414 | 107,357,658 |
| Critical Peak Hour Demand (kW) | 219,829 | 219,829 | 219,829 | 219,829 |
| Gas Savings (therms) | 1,218,300 | 1,218,300 | 1,218,300 | 4,873,200 |
| Total On Peak Hours (kWh) | 12,523,303 | 12,523,303 | 12,523,303 | 49,213,898 |
| Total On Peak Hours (%) | | | | 45.84% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.39% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

Sierra Residential DR Build Input and Output Sheets

Sierra - Residential Demand Response - Build

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/unit) | Effective Useful Life | Net-to-Gross |
|--------------|---------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|------------------------------------|-----------------------|--------------|
| Total | | | | | | | 942 | 1 | 1,244 | 140 | 131,871 | 33 | 10.0 | 100.0% |
| 2020 | \$1,039,229 | \$147,043 | \$881,453 | \$0 | \$10,733 | \$11 | | | | | | | | |
| 2021 | \$63,000 | \$11,000 | \$50,000 | | \$2,000 | \$2 | | | | | | | | |
| 2022 | \$63,000 | \$11,000 | \$50,000 | | \$2,000 | \$2 | | | | | | | | |
| 2023 | \$63,000 | \$11,000 | \$50,000 | | \$2,000 | \$2 | | | | | | | | |
| 2024 | \$63,000 | \$11,000 | \$50,000 | | \$2,000 | \$2 | | | | | | | | |
| 2025 | \$63,000 | \$11,000 | \$50,000 | | \$2,000 | \$2 | | | | | | | | |
| 2026 | \$63,000 | \$11,000 | \$50,000 | | \$2,000 | \$2 | | | | | | | | |
| 2027 | \$63,000 | \$11,000 | \$50,000 | | \$2,000 | \$2 | | | | | | | | |
| 2028 | \$63,000 | \$11,000 | \$50,000 | | \$2,000 | \$2 | | | | | | | | |
| 2029 | \$63,000 | \$11,000 | \$50,000 | | \$2,000 | \$2 | | | | | | | | |

*Units defined as an average device installed under the Sierra DR build program in 2020.

| | | | | |
|-------------------------|-------|----|-------|--|
| Devise to premise ratio | 1.24 | \$ | 8.63 | Future Utility admin and M&V cost is based on the actual expenses in the residential manage program in 2020 on a \$/kW basis |
| Gas Savings (Therm) | 33.25 | \$ | 40.10 | Future Implementation cost is based on the actual expenses in the residential manage program in 2020 on a \$/kW basis |
| Weighted Ave % NRD | 16% | \$ | 1.82 | Future Rebates are based on the actual expenses in the residential manage program in 2020 on a \$/kW basis |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|---------------------------|------------------------------|----------------------------------|
| Name: | 2020 DR Residential Build | Last Updated: | 5/25/2021 18:59 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Residential - Build |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2029 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,680,603 | \$1,430,187 | \$250,416 | 1.18 | \$1.340 |
| Total Resource Cost (TRC) | \$1,461,084 | \$1,430,187 | \$30,897 | 1.02 | \$1.340 |
| Utility Cost Test (UCT) | \$1,368,429 | \$1,454,067 | (\$85,638) | 0.94 | \$1.362 |
| Participant Cost Test (PCT) | \$103,900 | \$0 | \$103,900 | | \$0.000 |
| Ratepayer Impact (RIM) | \$1,368,429 | \$1,534,087 | (\$165,658) | 0.89 | \$1.437 |
| Societal Cost (SCT) | \$1,692,860 | \$1,430,187 | \$262,673 | 1.18 | \$1.340 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,039,225 | \$62,997 | \$62,997 | \$1,606,199 |
| Electric Benefits (\$) | \$165,229 | \$173,292 | \$173,267 | \$1,368,429 |
| Gas Benefits (\$) | \$12,215 | \$12,215 | \$12,215 | \$92,655 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 140,737 | 140,737 | 140,737 | 1,407,375 |
| Critical Peak Hour Demand (kW) | 1,452 | 1,452 | 1,452 | 1,452 |
| Gas Savings (therms) | 31,322 | 31,322 | 31,322 | 313,215 |
| Total On Peak Hours (kWh) | 52,222 | 52,222 | 52,222 | 639,273 |
| Total On Peak Hours (%) | | | | 45.42% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW): | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|----------------------|------------------------------|-----------------|
| Name: | Residential DR Build | Last Updated: | 3/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 10.00 |
| Region: | SPPC | Time and Date Printed | 3/26/2021 16:04 |
| Start Year: | 2020 | | |
| End Year: | 2029 | | |
| Notes: | | <i>ACE guru™ Model</i> | |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,680,603 | \$1,430,187 | \$250,416 | 1.18 | \$1.016 |
| Total Resource Cost (TRC) | \$1,461,084 | \$1,430,187 | \$30,897 | 1.02 | \$1.016 |
| Utility Cost Test (UCT) | \$1,368,429 | \$1,454,089 | (\$85,661) | 0.94 | \$1.033 |
| Participant Cost Test (PCT) | \$103,923 | \$0 | \$103,923 | | \$0.000 |
| Rate Payer Impact (RIM) | \$1,368,429 | \$1,534,110 | (\$165,681) | 0.89 | \$1.090 |
| Societal Cost (SCT) | \$1,692,860 | \$1,430,187 | \$262,673 | 1.18 | \$1.016 |

*Includes Rebates Paid to Freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,039,229 | \$63,000 | \$63,000 | \$1,434,089 |
| Electric Benefit (\$) | \$165,229 | \$173,292 | \$173,267 | \$1,368,429 |
| Gas Benefit (\$) | \$12,230 | 12,230 | 12,230 | \$92,655 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 140,737 | 140,737 | 140,737 | 1,407,375 |
| Critical Peak Hour Demand (kW) | 1,452 | 1,452 | 1,452 | 1,452 |
| Gas Savings (Therms) | 31,322 | 31,322 | 31,322 | 313,215 |
| Total on Peak Hours (kWh) | 50,770 | 50,770 | 50,770 | 507,699 |
| Total on Peak Hours (%) | | | | 36.07% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate | 6.75% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | <u>Scenarios</u> | |
| Line Loss (Energy) | 6.30% | Measure Life | 100% |
| Line Loss (Demand) | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-to-Gross Ratio | 100.00% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

Sierra - Residential DR Build 2022

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms / unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|--------------------------------------|-----------------------|----------------|
| Total | | | | | | | 2,700 | 1 | 3,000 | 259 | 700,000 | 33 | 10.0 | 100.0% |
| 2022 | \$2,000,000 | \$310,793 | \$1,676,772 | \$0 | \$12,435 | \$5 | | | | | | | | |
| 2023 | \$183,000 | \$27,000 | \$150,000 | | \$6,000 | \$2 | | | | | | | | |
| 2024 | \$183,000 | \$27,000 | \$150,000 | | \$6,000 | \$2 | | | | | | | | |
| 2025 | \$183,000 | \$27,000 | \$150,000 | | \$6,000 | \$2 | | | | | | | | |
| 2026 | \$183,000 | \$27,000 | \$150,000 | | \$6,000 | \$2 | | | | | | | | |
| 2027 | \$183,000 | \$27,000 | \$150,000 | | \$6,000 | \$2 | | | | | | | | |
| 2028 | \$183,000 | \$27,000 | \$150,000 | | \$6,000 | \$2 | | | | | | | | |
| 2029 | \$183,000 | \$27,000 | \$150,000 | | \$6,000 | \$2 | | | | | | | | |
| 2030 | \$183,000 | \$27,000 | \$150,000 | | \$6,000 | \$2 | | | | | | | | |
| 2031 | \$183,000 | \$27,000 | \$150,000 | | \$6,000 | \$2 | | | | | | | | |

*Unit is defined as an average device installed under the Sierra DR build program in 2022.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.91 for DR kWh and the per unit annual kWh savings are adjusted by the 0.91 NTG rate.

Device to premise ratio 1.21 \$ 9.04 Future Utility admin and M&V cost is based on the actual expenses in the residential manage program in 2022 on a \$/kW basis
Gas Savings (Therm) 32.96 \$ 50.12 Future Implementation cost is based on the actual expenses in the residential manage program in 2022 on a \$/kW basis
Weighted Ave % NRD 19% \$ 2.06 Future Rebates are based on the actual expenses in the residential manage program in 2022 on a \$/kW basis

Sierra - Residential DR Build 2023

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms / unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|--------------------------------------|-----------------------|----------------|
| Total | | | | | | | 2,700 | 1 | 3,000 | 259 | 700,000 | 33 | 10.0 | 100.0% |
| 2023 | \$2,000,000 | \$310,793 | \$1,676,772 | \$0 | \$12,435 | \$5 | | | | | | | | |
| 2024 | \$218,000 | \$32,000 | \$179,000 | | \$7,000 | \$3 | | | | | | | | |
| 2025 | \$218,000 | \$32,000 | \$179,000 | | \$7,000 | \$3 | | | | | | | | |
| 2026 | \$218,000 | \$32,000 | \$179,000 | | \$7,000 | \$3 | | | | | | | | |
| 2027 | \$218,000 | \$32,000 | \$179,000 | | \$7,000 | \$3 | | | | | | | | |
| 2028 | \$218,000 | \$32,000 | \$179,000 | | \$7,000 | \$3 | | | | | | | | |
| 2029 | \$218,000 | \$32,000 | \$179,000 | | \$7,000 | \$3 | | | | | | | | |
| 2030 | \$218,000 | \$32,000 | \$179,000 | | \$7,000 | \$3 | | | | | | | | |
| 2031 | \$218,000 | \$32,000 | \$179,000 | | \$7,000 | \$3 | | | | | | | | |
| 2032 | \$218,000 | \$32,000 | \$179,000 | | \$7,000 | \$3 | | | | | | | | |

*Unit is defined as an average device installed under the Sierra DR build program in 2023.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.91 for DR kWh and the per unit annual kWh savings are adjusted by the 0.91 NTG rate.

Device to premise ratio 1.21 \$ 10.74 Future Utility admin and M&V cost is based on the actual expenses in the residential manage program in 2023 on a \$/kW basis
Gas Savings (Therm) 32.96 \$ 59.54 Future Implementation cost is based on the actual expenses in the residential manage program in 2023 on a \$/kW basis
Weighted Ave % NRD 19% \$ 2.45 Future Rebates are based on the actual expenses in the residential manage program in 2023 on a \$/kW basis

Sierra - Residential DR Build 2024

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms / unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|--------------------------------------|-----------------------|----------------|
| Total | | | | | | | 2,700 | 1.111 | 3,000 | 259.3 | 700,000 | 32.96 | 10.0 | 100.0% |
| 2024 | \$2,000,000 | \$310,793 | \$1,676,772 | \$0 | \$12,435 | \$5 | | | | | | | | |
| 2025 | \$208,000 | \$31,000 | \$170,000 | | \$7,000 | \$3 | | | | | | | | |
| 2026 | \$208,000 | \$31,000 | \$170,000 | | \$7,000 | \$3 | | | | | | | | |
| 2027 | \$208,000 | \$31,000 | \$170,000 | | \$7,000 | \$3 | | | | | | | | |
| 2028 | \$208,000 | \$31,000 | \$170,000 | | \$7,000 | \$3 | | | | | | | | |
| 2029 | \$208,000 | \$31,000 | \$170,000 | | \$7,000 | \$3 | | | | | | | | |
| 2030 | \$208,000 | \$31,000 | \$170,000 | | \$7,000 | \$3 | | | | | | | | |
| 2031 | \$208,000 | \$31,000 | \$170,000 | | \$7,000 | \$3 | | | | | | | | |
| 2032 | \$208,000 | \$31,000 | \$170,000 | | \$7,000 | \$3 | | | | | | | | |
| 2033 | \$208,000 | \$31,000 | \$170,000 | | \$7,000 | \$3 | | | | | | | | |

*Unit is defined as an average device installed under the Sierra DR build program in 2024.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.91 for DR kWh and the per unit annual kWh savings are adjusted by the 0.91 NTG rate.

Device to premise ratio 1.21 \$ 10.22 Future Utility admin and M&V cost is based on the actual expenses in the residential manage program in 2024 on a \$/kW basis
Gas Savings (Therm) 32.96 \$ 56.68 Future Implementation cost is based on the actual expenses in the residential manage program in 2024 on a \$/kW basis
Weighted Ave % NRD 19% \$ 2.33 Future Rebates are based on the actual expenses in the residential manage program in 2024 on a \$/kW basis

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | |
|---|---------------------------|------------------------------|----------------------------------|
| Name: | 2022 DR Residential Build | Last Updated: | 5/25/2021 19:11 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Residential - Build |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2031 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |
| Stakeholder Perspectives & Tests | | | |
| | Benefits (PV) | Costs (PV) | Net Benefits (PV) |
| NEB Total Resource Cost (NTRC) | \$4,383,310 | \$3,153,126 | \$1,230,184 |
| Total Resource Cost (TRC) | \$3,810,765 | \$3,153,126 | \$657,639 |
| Utility Cost Test (UCT) | \$3,547,510 | \$3,205,044 | \$342,466 |
| Participant Cost Test (PCT) | \$438,412 | \$0 | \$438,412 |
| Ratepayer Impact (RIM) | \$3,547,510 | \$3,591,538 | (\$44,028) |
| Societal Cost (SCT) | \$4,425,696 | \$3,153,126 | \$1,272,570 |
| B/C Ratio | | | |
| | | | 1.39 |
| | | | 1.21 |
| | | | 1.11 |
| | | | 0.99 |
| | | | 1.40 |
| Cost of Conserved Energy (\$/kWh) | | | |
| | | | \$0.612 |
| | | | \$0.612 |
| | | | \$0.622 |
| | | | \$0.000 |
| | | | \$0.697 |
| | | | \$0.612 |
| <i>*Includes rebates paid to freeriders</i> | | | |
| Utility Savings & Costs* | | | |
| | 2022 | 2023 | 2024 |
| Total Utility Investment (\$) | \$2,000,012 | \$182,994 | \$182,994 |
| Electric Benefits (\$) | \$426,066 | \$430,853 | \$427,513 |
| Gas Benefits (\$) | \$34,707 | \$34,707 | \$34,707 |
| Incremental Energy & Demand Savings: | | | |
| Electric Savings (kWh) | 679,755 | 679,755 | 679,755 |
| Critical Peak Hour Demand (kW) | 3,501 | 3,501 | 3,501 |
| Gas Savings (therms) | 88,992 | 88,992 | 88,992 |
| Total On Peak Hours (kWh) | 248,717 | 248,717 | 248,717 |
| Total On Peak Hours (%) | | | 45.42% |
| <i>*Savings in this section are adjusted for line loss and net-to-gross</i> | | | |
| Financial Data | | Secondary Benefits | |
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|---|---------------------------|------------------------------|----------------------------------|
| Name: | 2023 DR Residential Build | Last Updated: | 5/25/2021 19:19 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Residential - Build |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2032 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |
| Stakeholder Perspectives & Tests | | | |
| | Benefits (PV) | Costs (PV) | Net Benefits (PV) |
| NEB Total Resource Cost (NTRC) | \$4,514,888 | \$3,377,019 | \$1,137,869 |
| Total Resource Cost (TRC) | \$3,925,157 | \$3,377,019 | \$548,137 |
| Utility Cost Test (UCT) | \$3,661,902 | \$3,435,516 | \$226,386 |
| Participant Cost Test (PCT) | \$444,990 | \$0 | \$444,990 |
| Ratepayer Impact (RIM) | \$3,661,902 | \$3,822,009 | (\$160,108) |
| Societal Cost (SCT) | \$4,557,987 | \$3,377,019 | \$1,180,968 |
| B/C Ratio | | | |
| | | | 1.34 |
| | | | 1.16 |
| | | | 1.07 |
| | | | 0.96 |
| | | | 1.35 |
| Cost of Conserved Energy (\$/kWh) | | | |
| | | | \$0.655 |
| | | | \$0.655 |
| | | | \$0.666 |
| | | | \$0.000 |
| | | | \$0.741 |
| | | | \$0.655 |
| <i>*Includes rebates paid to freeriders</i> | | | |
| Utility Savings & Costs* | | | |
| | 2023 | 2024 | 2025 |
| Total Utility Investment (\$) | \$2,000,012 | \$217,993 | \$217,993 |
| Electric Benefits (\$) | \$430,853 | \$427,513 | \$451,122 |
| Gas Benefits (\$) | \$34,707 | \$34,707 | \$34,707 |
| Incremental Energy & Demand Savings: | | | |
| Electric Savings (kWh) | 679,755 | 679,755 | 679,755 |
| Critical Peak Hour Demand (kW) | 3,501 | 3,501 | 3,501 |
| Gas Savings (therms) | 88,992 | 88,992 | 88,992 |
| Total On Peak Hours (kWh) | 248,717 | 248,717 | 248,717 |
| Total On Peak Hours (%) | | | 45.42% |
| <i>*Savings in this section are adjusted for line loss and net-to-gross</i> | | | |
| Financial Data | | Secondary Benefits | |
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|--|------------------------------|-------------------------------|
| Name: | 2024 DR Residential Build | Last Updated: | 5/25/2021 19:28 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Residential - Build |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2033 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | Program DB Name: PD_Reno_2024PY_April2021_AY.xlsx | | |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$4,663,316 | \$3,311,168 | \$1,352,148 | 1.41 | \$0.642 |
| Total Resource Cost (TRC) | \$4,054,197 | \$3,311,168 | \$743,029 | 1.22 | \$0.642 |
| Utility Cost Test (UCT) | \$3,790,942 | \$3,369,665 | \$421,277 | 1.13 | \$0.654 |
| Participant Cost Test (PCT) | \$444,990 | \$0 | \$444,990 | | \$0.000 |
| Ratepayer Impact (RIM) | \$3,790,942 | \$3,756,159 | \$34,784 | 1.01 | \$0.729 |
| Societal Cost (SCT) | \$4,707,231 | \$3,311,168 | \$1,396,063 | 1.42 | \$0.642 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$2,000,012 | \$207,993 | \$207,993 | \$3,871,949 |
| Electric Benefits (\$) | \$427,513 | \$451,122 | \$466,138 | \$3,790,942 |
| Gas Benefits (\$) | \$34,707 | \$34,707 | \$34,707 | \$263,255 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 679,755 | 679,755 | 679,755 | 6,797,545 |
| Critical Peak Hour Demand (kW) | 3,501 | 3,501 | 3,501 | 3,501 |
| Gas Savings (therms) | 88,992 | 88,992 | 88,992 | 889,920 |
| Total On Peak Hours (kWh) | 248,717 | 248,717 | 248,717 | 3,087,653 |
| Total On Peak Hours (%) | | | | 45.42% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

Sierra Residential DR Manage Input and Output Sheets

Sierra - Residential Demand Response - Manage

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/unit) | Effective Useful Life | Net-to-Gross |
|--------------|---------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|------------------------------------|-----------------------|--------------|
| Total | | | | | | \$2 | 11,052 | 1 | 12,251 | 63 | 697,500 | 33 | 7.3 | 100.0% |
| 2020 | \$619,335 | \$105,736 | \$491,305 | \$0 | \$22,295 | | | | | | | | | |
| 2021 | \$619,000 | \$106,000 | \$491,000 | | \$22,000 | | | | | | | | | |
| 2022 | \$619,000 | \$106,000 | \$491,000 | | \$22,000 | | | | | | | | | |
| 2023 | \$619,000 | \$106,000 | \$491,000 | | \$22,000 | | | | | | | | | |
| 2024 | \$619,000 | \$106,000 | \$491,000 | | \$22,000 | | | | | | | | | |
| 2025 | \$619,000 | \$106,000 | \$491,000 | | \$22,000 | | | | | | | | | |
| 2026 | \$619,000 | \$106,000 | \$491,000 | | \$22,000 | | | | | | | | | |

*Unit is defined as an average device managed under the Sierra DR manage program in 2020.

Devise to premise ratio 1.21
Gas Savings (Therm) 32.94
Weighted Ave % NRD 19%

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|----------------------------|------------------------------|----------------------------------|
| Name: | 2020 DR Residential Manage | Last Updated: | 5/25/2021 18:59 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Residential - Manage |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2026 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$12,378,420 | \$3,464,760 | \$8,913,660 | 3.57 | \$0.802 |
| Total Resource Cost (TRC) | \$10,761,559 | \$3,464,760 | \$7,296,799 | 3.11 | \$0.802 |
| Utility Cost Test (UCT) | \$9,937,568 | \$3,592,732 | \$6,344,836 | 2.77 | \$0.832 |
| Participant Cost Test (PCT) | \$451,810 | \$0 | \$451,810 | | \$0.000 |
| Ratepayer Impact (RIM) | \$9,937,568 | \$3,916,570 | \$6,020,997 | 2.54 | \$0.907 |
| Societal Cost (SCT) | \$12,473,552 | \$3,464,760 | \$9,008,791 | 3.60 | \$0.802 |

**Includes rebates paid to freeriders*

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$619,366 | \$618,993 | \$618,993 | \$4,333,327 |
| Electric Benefits (\$) | \$1,614,147 | \$1,695,048 | \$1,696,181 | \$9,937,568 |
| Gas Benefits (\$) | \$141,981 | \$141,981 | \$141,981 | \$823,992 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 744,397 | 744,397 | 744,397 | 5,210,779 |
| Critical Peak Hour Demand (kW) | 14,297 | 14,297 | 14,297 | 14,297 |
| Gas Savings (therms) | 364,053 | 364,053 | 364,053 | 2,548,370 |
| Total On Peak Hours (kWh) | 425,553 | 425,553 | 425,553 | 3,359,761 |
| Total On Peak Hours (%) | | | | 64.48% |

**Savings in this section are adjusted for line loss and net-to-gross*

| | | | |
|---|----------|---------------------------|------|
| Financial Data | | Secondary Benefits | |
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|-----------------------|------------------------------|-----------------|
| Name: | Residential DR Manage | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 7.00 |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:04 |
| Start Year: | 2020 | | |
| End Year: | 2026 | | |
| Notes: | | ACE guru™ Model | |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$12,378,421 | \$3,464,760 | \$8,913,660 | 3.57 | \$0.665 |
| Total Resource Cost (TRC) | \$10,761,559 | \$3,464,760 | \$7,296,799 | 3.11 | \$0.665 |
| Utility Cost Test (UCT) | \$9,937,568 | \$3,592,733 | \$6,344,835 | 2.77 | \$0.689 |
| Participant Cost Test (PCT) | \$451,811 | \$0 | \$451,811 | | \$0.000 |
| Rate Payer Impact (RIM) | \$9,937,568 | \$3,916,571 | \$6,020,996 | 2.54 | \$0.752 |
| Societal Cost (SCT) | \$12,473,552 | \$3,464,760 | \$9,008,791 | 3.60 | \$0.665 |

**Includes Rebates Paid to Freeriders*

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$619,335 | \$619,000 | \$619,000 | \$3,592,733 |
| Electric Benefit (\$) | \$1,614,147 | \$1,695,048 | \$1,696,181 | \$9,937,568 |
| Gas Benefit (\$) | \$142,148 | \$142,148 | \$142,148 | \$823,992 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 744,397 | 744,397 | 744,397 | 5,210,779 |
| Critical Peak Hour Demand (kW) | 14,297 | 14,297 | 14,297 | 14,297 |
| Gas Savings (Therms) | 364,053 | 364,053 | 364,053 | 2,548,370 |
| Total on Peak Hours (kWh) | 411,256 | 411,256 | 411,256 | 2,878,792 |
| Total on Peak Hours (%) | | | | 55.25% |

**Savings in this Section are Adjusted for Line Loss and Net-to-Gross*

| | | | |
|---|----------|---------------------------|------|
| Financial Data | | Secondary Benefits | |
| Discount Rate | 6.75% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 6.30% | Measure Life | 100% |
| Line Loss (Demand) | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-to-Gross Ratio | 100.00% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

Sierra - Residential DR Manage 2022

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/ unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|-------------------------------------|-----------------------|----------------|
| Total | | | | | | \$2 | 16,100 | 1 | 12,251 | 96 | 1,550,000 | 33 | 6 | 100.0% |
| 2022 | \$750,000 | \$110,711 | \$614,032 | \$0 | \$25,257 | | | | | | | | | |
| 2023 | \$750,000 | \$111,000 | \$614,000 | | \$25,000 | | | | | | | | | |
| 2024 | \$750,000 | \$111,000 | \$614,000 | | \$25,000 | | | | | | | | | |
| 2025 | \$750,000 | \$111,000 | \$614,000 | | \$25,000 | | | | | | | | | |
| 2026 | \$750,000 | \$111,000 | \$614,000 | | \$25,000 | | | | | | | | | |
| 2027 | \$750,000 | \$111,000 | \$614,000 | | \$25,000 | | | | | | | | | |

*Unit is defined as an average device managed under the Sierra DR manage program in 2022.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.91 for DR kWh and the per unit annual kWh savings are adjusted by the 0.91 NTG rate.

Devise to premise ratio 1.21
Gas Savings (Therm) 32.96
Weighted Ave % NRD 19%

Sierra - Residential DR Manage 2023

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/ unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|-------------------------------------|-----------------------|----------------|
| Total | | | | | | \$1 | 18,700 | 1 | 11,000 | 115 | 2,150,000 | 33 | 6 | 100.0% |
| 2023 | \$800,000 | \$118,092 | \$654,967 | \$0 | \$26,941 | | | | | | | | | |
| 2024 | \$800,000 | \$118,000 | \$655,000 | | \$27,000 | | | | | | | | | |
| 2025 | \$800,000 | \$118,000 | \$655,000 | | \$27,000 | | | | | | | | | |
| 2026 | \$800,000 | \$118,000 | \$655,000 | | \$27,000 | | | | | | | | | |
| 2027 | \$800,000 | \$118,000 | \$655,000 | | \$27,000 | | | | | | | | | |
| 2028 | \$800,000 | \$118,000 | \$655,000 | | \$27,000 | | | | | | | | | |

*Unit is defined as an average device managed under the Sierra DR manage program in 2023.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.91 for DR kWh and the per unit annual kWh savings are adjusted by the 0.91 NTG rate.

Devise to premise ratio 1.21
Gas Savings (Therm) 32.96
Weighted Ave % NRD 19%

Sierra - Residential DR Manage 2024

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Total Annual Savings (Therms/ unit) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|----------------------------|-------------------------------------|-----------------------|----------------|
| Total | | | | | | \$1 | 21,400 | 1 | 13,000 | 124 | 2,660,000 | 33 | 5 | 100.0% |
| 2024 | \$900,000 | \$132,853 | \$736,838 | \$0 | \$30,309 | | | | | | | | | |
| 2025 | \$900,000 | \$133,000 | \$737,000 | | \$30,000 | | | | | | | | | |
| 2026 | \$900,000 | \$133,000 | \$737,000 | | \$30,000 | | | | | | | | | |
| 2027 | \$900,000 | \$133,000 | \$737,000 | | \$30,000 | | | | | | | | | |
| 2028 | \$900,000 | \$133,000 | \$737,000 | | \$30,000 | | | | | | | | | |

*Unit is defined as an average device managed under the Sierra DR manage program in 2024.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.91 for DR kWh and the per unit annual kWh savings are adjusted by the 0.91 NTG rate.

Devise to premise ratio 1.21
Gas Savings (Therm) 32.96
Weighted Ave % NRD 19%

| | | | | | |
|--|----------------------------|------------------------------|----------------------------------|----------------------|--|
| Name: | 2022 DR Residential Manage | Last Updated: | 5/25/2021 19:11 | | |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 | | |
| Region : | Reno | Energy Savings Curve: | DR Residential - Manage | | |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsx | | |
| End Year: | 2027 | CAD File Name: | Reno_CAD_April2021_AY.xlsx | | |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx | | |
| | | | | | |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$11,721,970 | \$3,717,391 | \$8,004,579 | 3.15 | \$0.482 |
| Total Resource Cost (TRC) | \$10,190,854 | \$3,717,391 | \$6,473,463 | 2.74 | \$0.482 |
| Utility Cost Test (UCT) | \$9,129,628 | \$3,845,677 | \$5,283,951 | 2.37 | \$0.498 |
| Participant Cost Test (PCT) | \$706,848 | \$0 | \$706,848 | | \$0.000 |
| Ratepayer Impact (RIM) | \$9,129,628 | \$4,424,239 | \$4,705,389 | 2.06 | \$0.573 |
| Societal Cost (SCT) | \$11,852,709 | \$3,717,391 | \$8,135,319 | 3.19 | \$0.482 |
| *Includes rebates paid to freeriders | | | | | |
| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project | |
| Total Utility Investment (\$) | \$750,020 | \$749,955 | \$749,955 | \$4,499,795 | |
| Electric Benefits (\$) | \$1,719,991 | \$1,741,790 | \$1,719,532 | \$9,129,628 | |
| Gas Benefits (\$) | \$206,956 | \$206,956 | \$206,956 | \$1,061,226 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 1,505,187 | 1,505,187 | 1,505,187 | 9,031,120 | |
| Critical Peak Hour Demand (kW) | 14,297 | 14,297 | 14,297 | 14,297 | |
| Gas Savings (therms) | 530,656 | 530,656 | 530,656 | 3,183,936 | |
| Total On Peak Hours (kWh) | 845,865 | 845,865 | 845,865 | 5,823,008 | |
| Total On Peak Hours (%) | | | | 64.48% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| Financial Data | | Secondary Benefits | | | |
| Discount Rate: | 6.75% | Other Savings | | | |
| Rate Escalator: | 0.00% | \$0 | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 6.30% | Scenarios: | | | |
| Line Loss (Demand): | 14.31% | Measure Life | | | |
| Avoided T&D Capacity \$/MW: | \$46,748 | Energy Savings | | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Energy Cost | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Avoided Capacity Cost | | | |
| Electric Retail Rate (\$/KWh): | \$0.08 | Incremental Measure Cost | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Residential DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|----------------------------|------------------------------|----------------------------------|
| Name: | 2023 DR Residential Manage | Last Updated: | 5/25/2021 19:18 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Residential - Manage |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2028 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$11,197,461 | \$3,963,841 | \$7,233,620 | 2.82 | \$0.370 |
| Total Resource Cost (TRC) | \$9,734,856 | \$3,963,841 | \$5,771,015 | 2.46 | \$0.370 |
| Utility Cost Test (UCT) | \$8,502,252 | \$4,101,922 | \$4,400,330 | 2.07 | \$0.383 |
| Participant Cost Test (PCT) | \$940,486 | \$0 | \$940,486 | | \$0.000 |
| Ratepayer Impact (RIM) | \$8,502,252 | \$4,904,327 | \$3,597,925 | 1.73 | \$0.458 |
| Societal Cost (SCT) | \$11,356,044 | \$3,963,841 | \$7,392,203 | 2.86 | \$0.370 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$799,987 | \$799,928 | \$799,928 | \$4,799,627 |
| Electric Benefits (\$) | \$1,587,704 | \$1,562,092 | \$1,645,023 | \$8,502,252 |
| Gas Benefits (\$) | \$240,377 | \$240,377 | \$240,377 | \$1,232,604 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 2,087,535 | 2,087,535 | 2,087,535 | 12,525,208 |
| Critical Peak Hour Demand (kW) | 12,837 | 12,837 | 12,837 | 12,837 |
| Gas Savings (therms) | 616,352 | 616,352 | 616,352 | 3,698,112 |
| Total On Peak Hours (kWh) | 1,166,134 | 1,166,134 | 1,166,134 | 8,075,896 |
| Total On Peak Hours (%) | | | | 64.48% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|----------------------------|------------------------------|----------------------------------|
| Name: | 2024 DR Residential Manage | Last Updated: | 5/25/2021 19:28 |
| Customer Sector: | Residential | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Residential - Manage |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2028 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$11,447,710 | \$3,833,273 | \$7,614,436 | 2.99 | \$0.337 |
| Total Resource Cost (TRC) | \$9,952,417 | \$3,833,273 | \$6,119,144 | 2.60 | \$0.337 |
| Utility Cost Test (UCT) | \$8,740,282 | \$3,965,717 | \$4,774,565 | 2.20 | \$0.348 |
| Participant Cost Test (PCT) | \$985,646 | \$0 | \$985,646 | | \$0.000 |
| Ratepayer Impact (RIM) | \$8,740,282 | \$4,818,919 | \$3,921,363 | 1.81 | \$0.423 |
| Societal Cost (SCT) | \$11,606,674 | \$3,833,273 | \$7,773,401 | 3.03 | \$0.337 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$900,079 | \$899,960 | \$899,960 | \$4,499,919 |
| Electric Benefits (\$) | \$1,848,969 | \$1,947,957 | \$2,012,126 | \$8,740,282 |
| Gas Benefits (\$) | \$275,084 | \$275,084 | \$275,084 | \$1,212,135 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 2,583,074 | 2,583,074 | 2,583,074 | 12,915,368 |
| Critical Peak Hour Demand (kW) | 15,171 | 15,171 | 15,171 | 15,171 |
| Gas Savings (therms) | 705,344 | 705,344 | 705,344 | 3,526,720 |
| Total On Peak Hours (kWh) | 1,442,238 | 1,442,238 | 1,442,238 | 8,327,460 |
| Total On Peak Hours (%) | | | | 64.48% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.02% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Assessments/In-home Energy Assessments Program Data Sheet

2020-2021 Energy Assessments and 2022-2024 In-Home Energy Assessments Program

Description

The Energy Assessments program (“Program”) provides residential customers with a personalized assessment of how they use energy. The Program encourages customers to be wise energy consumers while offering tools, tips and recommendation to reduce their usage. Customers can complete an online assessment or call PowerShift by NV Energy for an in-home assessment

This Program targets its outreach efforts via email, NV Energy’s website, community events and various communication outlets.

There were two components to the Program in 2020 and 2021:

- Online Energy Assessment (“OEA”) – wherein the customer completes a home energy profile via NV Energy’s website that determines the household’s energy usage through a disaggregation process. This results in the customer receiving customized energy-saving tips.
- In-home Energy Assessment (“IHEA”) – conducted by a trained PowerShift Energy Advisor who evaluates the customer’s home and energy usage.

During the IHEA walk through, the energy advisor evaluates the efficiency of the home’s appliances, caulking around windows and doors, and insulation levels of walls and ceilings. The energy advisor also shares a history of energy consumption and the associated billing history to determine high usage times. The IHEA is available as a standalone program, pursuant to NAC § 704.814, or offered with the DI and/or smart thermostat programs in one visit. NV Energy refers to this as a bundle appointment.

The OEA is a comprehensive disaggregation tool utilizing meter data. Using patented algorithms, the tool isolates appliance usage and converts the data into itemized energy bills providing useful insights. The data also considers billing history, weather data, and customer segmentation. This provides relevant actionable analysis uniquely customized to the customer’s household electric and gas usage. The online “Ways to Save” option provides the customer with a survey consisting of questions about their home energy usage with appliance breakdown so see where they are using the most energy.

In both Program components’ delivery methods, the customer receives a customized assessment report of their household that details how energy is consumed and prescribes measures that can be implemented to manage their energy use. The home’s assessment report highlights which appliances might need upgrading, provide tips on how to better their usage behavior, and prompts the customer to sign-up for other NV Energy programs. Once the home’s assessment report is provided, NV Energy collaborates with the customer in the report’s implementation, which not only results in energy savings but also increases customer satisfaction.

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2020 Results

For the 2020 program year, the expenditures, demand and energy savings, and participant results for the Program are provided in Table DSM-54 below.

Table DSM-54: 2020 Energy Assessments Expenditures, Savings, and Participants Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|------------------------------|--------------------|--------------------|-------------------------|------------------|----------------|-------------------------|--------------|------------|-------------------------|---------------|---------------|-------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Energy Assessments - Online | \$1,154,000 | \$1,058,765 | (8.3%) | 4,000,000 | 0 | (100.0%) | 1,224 | 0 | (100.0%) | 22,600 | 35,228 | 55.9% |
| Energy Assessments - In-Home | \$956,000 | \$562,127 | (41.2%) | 2,407,600 | 539,323 | (77.6%) | 737 | 212 | (71.2%) | 5,200 | 2,433 | (53.2%) |
| Nevada Power Total | \$2,110,000 | \$1,620,892 | (23.2%) | 6,407,600 | 539,323 | (91.6%) | 1,961 | 212 | (89.2%) | 27,800 | 37,661 | 35.5% |
| Sierra | | | | | | | | | | | | |
| Energy Assessments - Online | \$469,000 | \$430,793 | (8.1%) | 1,000,000 | 0 | (100.0%) | 327 | 0 | (100.0%) | 10,700 | 8,945 | (16.4%) |
| Energy Assessments - In-Home | \$456,000 | \$245,707 | (46.1%) | 1,030,000 | 60,325 | (94.1%) | 654 | 20 | (96.9%) | 2,200 | 796 | (63.8%) |
| Sierra Total | \$925,000 | \$676,501 | (26.9%) | 2,030,000 | 60,325 | (97.0%) | 981 | 20 | (98.0%) | 12,900 | 9,741 | (24.5%) |
| NV Energy | | | | | | | | | | | | |
| Energy Assessments - Online | \$1,623,000 | \$1,489,559 | (8.2%) | 5,000,000 | 0 | (100.0%) | 1,551 | 0 | (100.0%) | 33,300 | 44,173 | 32.7% |
| Energy Assessments - In-Home | \$1,412,000 | \$807,834 | (42.8%) | 3,437,600 | 599,648 | (82.6%) | 1,391 | 232 | (83.3%) | 7,400 | 3,229 | (56.4%) |
| NV Energy Total | \$3,035,000 | \$2,297,393 | (24.3%) | 8,437,600 | 599,648 | (92.9%) | 2,942 | 232 | (92.1%) | 40,700 | 47,402 | 16.5% |

2020 Overall Results and Activities

The Program provided 3,229 residential in-home visits, 44,173 OEAs, and 1,843 bundled appointments statewide. At Nevada Power, the Program achieved 539,323 kWh in savings or 8 percent of its energy savings target, while expending 77 percent of the approved budget. In Sierra, the Program achieved 60,325 kWh in savings or 3 percent of its energy savings target, while expending 73 percent of the approved budget.

COVID-19 was a major factor that contributed to the in-home Program's performance. Safety precautions were put in place which suspended in-home services from mid-March through the end of June 2020, which in turn gave more visibility to the online component of the Program. In-home services were restored after the Program's field services personnel applied rigorous safety and health processes to protect both the customer and field services personnel. However, customers were still cautious about letting personnel into their homes, thus slowing down participation in the Program.

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The bundling of services, which included a smart thermostat installation, an IHEA, and the DI of energy saving measures, aided in the Program's customer participation, as well as increased cost savings for each program involved, making them more cost-effective. Customer satisfaction also increased, as customers were provided all of these services in one appointment.

Those customers who were not comfortable with an energy advisor walking through their home benefitted from the different levels of assistance the OEA tool provided. This tool uses integrated comprehensive data, appliance analysis, billing histories, weather data, customer segmentation, and analytic tools to provide a relevant actionable analysis, uniquely customized to the customer's home energy use.

2020 Lessons Learned and Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years:

- The Program is developing a virtual assessment component, wherein a certified PowerShift Energy Advisor walks the customer through an IHEA through a handheld smart device.
- The disaggregation tool was scheduled for an upgrade in the 2020 program year; however, due to COVID-19 restrictions, this upgrade will be moved to the 2021 program year. This upgrade will create a residential energy consumption view and provide easier integration with the energy saving tips. The tool will offer value to customers by providing better visualization of their distinct usage and costs. Marketing of the upgraded OEA tool will be key to increase customer online visits and participation.
- Results of M&V analysis identified zero energy savings for the OEA component for Nevada Power and Sierra customers. This was due to the impact of COVID-19 and customers staying home throughout the lockdown and increasing their electric consumption.

2021 Plan

For the 2021 program year, the authorized budgets, projected demand and energy savings targets, and participant goals for the Program are provided in Table DSM-55 below.

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Table DSM-55: 2021 Energy Assessments Authorized Budgets, Savings Targets, and Participant Goals

| 2021 Program Components | Authorized Budget Goal | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|--------------------------------|-------------------------------|--|---|-------------------------|
| Nevada Power | | | | |
| Energy Assessments - Online | \$1,154,000 | 1,880 | 5,000,000 | 41,100 |
| Energy Assessments - In-Home | \$956,000 | 1,830 | 3,200,000 | 6,430 |
| Nevada Power Total | \$2,110,000 | 3,710 | 8,200,000 | 47,530 |
| Sierra | | | | |
| Energy Assessments - Online | \$469,000 | 393 | 1,000,000 | 20,000 |
| Energy Assessments - In-Home | \$456,000 | 211 | 1,030,000 | 3,707 |
| Sierra Total | \$925,000 | 604 | 2,030,000 | 23,707 |
| NV Energy | | | | |
| Energy Assessments - Online | \$1,623,000 | 2,273 | 6,000,000 | 61,100 |
| Energy Assessments - In-Home | \$1,412,000 | 2,041 | 4,230,000 | 10,137 |
| NV Energy Total | \$3,035,000 | 4,314 | 10,230,000 | 71,237 |

As in 2020 program year, the Program will provide services related to IHEA and OEA. The Companies have addressed health and safety guidelines associated with COVID and will continue to provide Program offerings, while monitoring the ongoing social distance protocols within the state to offer customers alternatives to in-home services.

The Program will increase its efforts to target low-income customers through a strategic marketing plan that includes a direct-mail campaign to these customers within NV Energy's service territories. NV Energy will implement this by partnering with local agencies, such as food banks, the low-income outreach, and the Companies' internal customer service team, to reach those customers who have applied for energy assistance.

For 2021, IHEA will continue to be marketed as part of the bundled appointment. This approach has proven to be cost-effective for all three programs components and convenient to the customer.

2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year:

- NV Energy has been researching opportunities to bring virtual assessments to residential customers as a secondary option to in-home services to help support the Program's growth.

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- NV Energy will launch a PowerShift Smart Shop as an additional marketing and energy efficiency engagement channel for customers.
- The OEA tool will be upgraded to be more customer interactive, by allowing the customer to view their usage in different ways, view the weather along with their usage, and give them visualizations of the provided tips.
- Due to the zero-energy savings for the OEA component, NV Energy and ADM, a third-party evaluator, will incorporate a thorough review of the Program's tracking data and will meet on a quarterly basis to discuss preliminary results.
- The Program will target customers who have not participated in it for more than three years and/or customers who have more than 13 months of billing data.

2022-2024 Proposed Plans

For the 2022 through 2024 program years, the proposed budgets, projected demand and energy savings, and participant goals for the Program are provided in Table DSM-56 below.

Table DSM-56: 2022-2024 In-Home Energy Assessments Proposed Budgets, Savings Targets, and Participant Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|----------------------------|------------------------|--|---|-------------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| In-Home Energy Assessments | \$1,070,000 | 768 | 2,000,000 | 6,000 |
| Sierra | | | | |
| In-Home Energy Assessments | \$380,000 | 215 | 600,000 | 2,000 |
| NV Energy | \$1,450,000 | 983 | 2,600,000 | 8,000 |
| 2023 | | | | |
| Nevada Power | | | | |
| In-Home Energy Assessments | \$1,070,000 | 768 | 2,000,000 | 6,000 |
| Sierra | | | | |
| In-Home Energy Assessments | \$380,000 | 215 | 600,000 | 2,000 |
| NV Energy | \$1,450,000 | 983 | 2,600,000 | 8,000 |
| 2024 | | | | |
| Nevada Power | | | | |
| In-Home Energy Assessments | \$1,070,000 | 768 | 2,000,000 | 6,000 |
| Sierra | | | | |
| In-Home Energy Assessments | \$380,000 | 215 | 600,000 | 2,000 |
| NV Energy | \$1,450,000 | 983 | 2,600,000 | 8,000 |

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The Program will offer IHEA as a standalone program throughout NV Energy's service territories to all residential customers as part of the bundle appointment or as a single offering. Customers will continue to benefit from an in-person walk-through assessment or a virtual assessment to help them identify ways to save on their energy bill. The Program also responds to high bill complaints, further enhancing its value to NV Energy's customers.

Additional outreach efforts will further ensure customers are aware of available energy assessment services. With these efforts, the Program will increase its participant targets to not only achieve energy savings, but to help more customers throughout the communities NV Energy serves. This will also support energy efficiency education efforts and help to strengthen the Companies' relationship with its customers. The OEA component of the Program will move to Energy Education, while still allowing customers to use the self-help tool online.

2022-2024 Proposed Plan Enhancements

The following are the proposed Program plan enhancements that will be considered during the 2022 through 2024 program years:

- The Program will strategically look to cross promote other DSM programs to help meet the needs of those who need additional resources. An example of this strategy is the PowerShift Energy Advisors will screen each participants' home for additional retrofit measures available through the DI program during the energy assessment. The advisor will confirm the fuel source for water and space heating, visually inspect the level of attic insulation and assess the condition of the ducts. If additional energy efficiency opportunities are identified, the energy advisors will review the recommended improvements with the customer and provide them with additional participation information for the deep retrofits.
- The Program will look to partner with NV Energy's Community Relations, Customer Service (energy assistance) and the Government Affairs departments to identify the needs in the community. This approach supports the strategic efforts to help low-income customers.

Measurement and Verification

The M&V reports that provide third-party evaluation results performed ADM are included in the Technical Appendices DSM-08 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-08 and DSM-17, which are calculated by the third-party evaluator, ADM.

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Incremental Costs

There were no incremental costs or out-of-pocket expenses to the customer in this Program.

Incentives/Rebates

There were no incentives or rebates paid by this Program.

Measure Life

As determined in the 2020 M&V Report, the EUL was 2 years for the IHEA and 1 year for the OEA for both Nevada Power and Sierra. For 2022 through 2024, in-home energy assessments will have an EUL of 2 years for both Nevada Power and Sierra.

Measure Units

The Program is measured by the number of participants.

Savings

For IHEA, the verified energy savings were 222 kWh per unit for Nevada Power and 76 kWh for Sierra. For OEA, the verified energy savings was 0 kWh per unit for Nevada Power and Sierra. For 2022 through 2024, IHEA has a projected energy savings of 333 kWh per unit for Nevada Power and is 300 kWh per unit for Sierra.

Financial Analysis

Financial assumptions are provided in Section 4 of the DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program has an overall cost effectiveness NTRC score for 2020 of 0.05 for Nevada Power and 0.01 for Sierra. The Program has a projected cost effectiveness NTRC ratio for IHEA of 0.33 for 2022, 0.32 for 2023, and 0.33 for 2024 for Nevada Power and for Sierra 0.26 for 2022, 0.25 for 2023, and 0.26 for 2024.

Nevada Power Input and Output Sheets

Nevada Power - Energy Assessments

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|---------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| Online | \$1,058,765 | \$105,637 | \$953,129 | 35,228 | 0 | 0 | 1.0 | 100.0% |
| In-home | \$562,127 | \$111,085 | \$451,042 | 2,433 | 222 | 539,323 | 2.0 | 100.0% |
| Total | \$1,620,892 | \$216,722 | \$1,404,170 | 37,661 | 14 | 539,323 | 2.0 | 100.0% |

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| | | | |
|-------------------------|-------------------------|------------------------------|-----------------------------------|
| Name: | 2020 Energy Assessments | Last Updated: | 5/25/2021 19:52 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Vegas | Energy Savings Curve: | Home Energy Assessments |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$82,862 | \$1,620,892 | (\$1,538,030) | 0.05 | \$1.480 |
| Total Resource Cost (TRC) | \$72,006 | \$1,620,892 | (\$1,548,887) | 0.04 | \$1.480 |
| Utility Cost Test (UCT) | \$72,006 | \$1,620,892 | (\$1,548,887) | 0.04 | \$1.480 |
| Participant Cost Test (PCT) | \$104,270 | \$0 | \$104,270 | | \$0.000 |
| Ratepayer Impact (RIM) | \$72,006 | \$1,725,163 | (\$1,653,157) | 0.04 | \$1.576 |
| Societal Cost (SCT) | \$85,268 | \$1,620,892 | (\$1,535,624) | 0.05 | \$1.480 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,620,892 | \$0 | \$0 | \$1,620,892 |
| Electric Benefits (\$) | \$37,049 | \$0 | \$0 | \$72,006 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 566,361 | 0 | 0 | 1,132,722 |
| Critical Peak Hour Demand (kW) | 207 | 0 | 0 | 207 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 117,715 | 0 | 0 | 235,015 |
| Total On Peak Hours (%) | | | | 20.75% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.08% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|--------------------|------------------------------|----------------|
| Name: | Energy Assessments | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 2.00 |
| Region: | NPC | Date and Time Printed | 5/27/2021 8:18 |
| Start Year: | 2020 | | |
| End Year: | 2020 | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$82,861 | \$1,620,892 | (\$1,538,031) | 0.05 | \$1.431 |
| Total Resource Cost (TRC) | \$72,005 | \$1,620,892 | (\$1,548,887) | 0.04 | \$1.431 |
| Utility Cost Test (UCT) | \$72,005 | \$1,620,892 | (\$1,548,887) | 0.04 | \$1.431 |
| Participant Cost Test (PCT) | \$104,270 | \$0 | \$104,270 | | \$0.000 |
| Rate Payer Impact (RIM) | \$72,005 | \$1,725,163 | (\$1,653,158) | 0.04 | \$1.523 |
| Societal Cost (SCT) | \$85,268 | \$1,620,892 | (\$1,535,625) | 0.05 | \$1.431 |

*Includes Rebates Paid to Freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,620,892 | \$0 | \$0 | \$1,620,892 |
| Electric Benefit (\$) | \$37,048 | \$0 | \$0 | \$72,005 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 566,361 | 0 | 0 | 1,132,722 |
| Critical Peak Hour Demand (kW) | 207 | 0 | 0 | 207 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 117,508 | 0 | 0 | 235,015 |
| Total on Peak Hours (%) | | | | 20.75% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.08% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.10 | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | |
| Net-to-Gross Ratio | 100.0% | | |

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Nevada Power - In-Home Energy Assessments

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| In-home | \$1,070,000 | \$185,748 | \$884,252 | 6,000 | 333 | 2,000,000 | 2.0 | 100.0% |
| Total | \$1,070,000 | \$185,748 | \$884,252 | 6,000 | 333 | 2,000,000 | 2.0 | 100.0% |

Nevada Power - In-Home Energy Assessments

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| In-home | \$1,070,000 | \$185,748 | \$884,252 | 6,000 | 333 | 2,000,000 | 2.0 | 100.0% |
| Total | \$1,070,000 | \$185,748 | \$884,252 | 6,000 | 333 | 2,000,000 | 2.0 | 100.0% |

Nevada Power - In-Home Energy Assessments

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| In-home | \$1,070,000 | \$185,748 | \$884,252 | 6,000 | 333 | 2,000,000 | 2.0 | 100.0% |
| Total | \$1,070,000 | \$185,748 | \$884,252 | 6,000 | 333 | 2,000,000 | 2.0 | 100.0% |

| | | | | | |
|---|---------------------------------|------------------------------|-----------------------------------|----------------------|--|
| Name: | 2022 In-Home Energy Assessments | Last Updated: | 5/25/2021 20:03 | | |
| Customer Sector: | Residential | Avg Measure Life: | 2.00 | | |
| Region : | Vegas | Energy Savings Curve: | IHEA | | |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm | | |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx | | |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx | | |
| | | | | | |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$353,284 | \$1,070,000 | (\$716,716) | 0.33 | \$0.264 |
| Total Resource Cost (TRC) | \$306,996 | \$1,070,000 | (\$763,004) | 0.29 | \$0.264 |
| Utility Cost Test (UCT) | \$306,996 | \$1,070,000 | (\$763,004) | 0.29 | \$0.264 |
| Participant Cost Test (PCT) | \$386,672 | \$0 | \$386,672 | | \$0.000 |
| Ratepayer Impact (RIM) | \$306,996 | \$1,456,672 | (\$1,149,675) | 0.21 | \$0.359 |
| Societal Cost (SCT) | \$365,663 | \$1,070,000 | (\$704,337) | 0.34 | \$0.264 |
| <i>*Includes rebates paid to free riders</i> | | | | | |
| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project | |
| Total Utility Investment (\$) | \$1,070,000 | \$0 | \$0 | \$1,070,000 | |
| Electric Benefits (\$) | \$158,043 | \$0 | \$0 | \$306,996 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 2,100,267 | 0 | 0 | 4,200,533 | |
| Critical Peak Hour Demand (kW) | 768 | 0 | 0 | 768 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 436,528 | 0 | 0 | 871,519 | |
| Total On Peak Hours (%) | | | | 20.75% | |
| <i>*Savings in this section are adjusted for line loss and net-to-gross</i> | | | | | |
| | | | | | |
| Financial Data | | Secondary Benefits | | | |
| Discount Rate: | 7.14% | Other Savings | | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 4.77% | | | | |
| Line Loss (Demand): | 9.93% | | | | |
| Avoided T&D Capacity \$/MW: | \$52,165 | | | | |
| Environmental Adder (SCT only) | 10.00% | | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.08% | | | | |
| Electric Retail Rate (\$/KWh): | \$0.10 | | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |
| | | Scenarios: | | | |
| | | Measure Life | | 100% | |
| | | Energy Savings | | 100% | |
| | | Avoided Energy Cost | | 100% | |
| | | Avoided Capacity Cost | | 100% | |
| | | Incremental Measure Cost | | 100% | |

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| | | | |
|-------------------------|---------------------------------|------------------------------|-----------------------------------|
| Name: | 2023 In-Home Energy Assessments | Last Updated: | 5/25/2021 20:11 |
| Customer Sector: | Residential | Avg Measure Life: | 2.00 |
| Region : | Vegas | Energy Savings Curve: | IHEA |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|---------------------------|-------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$341,502 | \$1,070,000 | (\$728,498) | 0.32 | \$0.264 |
| Total Resource Cost (TRC) | \$296,758 | \$1,070,000 | (\$773,242) | 0.28 | \$0.264 |
| Utility Cost Test (UCT) | \$296,758 | \$1,070,000 | (\$773,242) | 0.28 | \$0.264 |
| Participant Cost Test (PCT) | \$386,672 | \$0 | \$386,672 | | \$0.000 |
| Ratepayer Impact (RIM) | \$296,758 | \$1,456,672 | (\$1,159,914) | 0.20 | \$0.359 |
| Societal Cost (SCT) | \$352,785 | \$1,070,000 | (\$717,215) | 0.33 | \$0.264 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$1,070,000 | \$0 | \$0 | \$1,070,000 | |
| Electric Benefits (\$) | \$159,588 | \$0 | \$0 | \$296,758 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 2,100,267 | 0 | 0 | 4,200,533 | |
| Critical Peak Hour Demand (kW) | 768 | 0 | 0 | 768 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 436,528 | 0 | 0 | 871,519 | |
| Total On Peak Hours (%) | | | | 20.75% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | <u>Secondary Benefits</u> | | | | |
| Discount Rate: | 7.14% | Other Savings | | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 4.77% | | | | |
| Line Loss (Demand): | 9.93% | | | | |
| Avoided T&D Capacity \$/MW: | \$52,165 | | | | |
| Environmental Adder (SCT only) | 10.00% | | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.08% | | | | |
| Electric Retail Rate (\$/KWh): | \$0.10 | | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

| | | | |
|-------------------------|---------------------------------|------------------------------|-----------------------------------|
| Name: | 2024 In-Home Energy Assessments | Last Updated: | 5/25/2021 20:19 |
| Customer Sector: | Residential | Avg Measure Life: | 2.00 |
| Region : | Vegas | Energy Savings Curve: | IHEA |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|---------------------------|-------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$349,045 | \$1,070,000 | (\$720,955) | 0.33 | \$0.264 |
| Total Resource Cost (TRC) | \$303,312 | \$1,070,000 | (\$766,688) | 0.28 | \$0.264 |
| Utility Cost Test (UCT) | \$303,312 | \$1,070,000 | (\$766,688) | 0.28 | \$0.264 |
| Participant Cost Test (PCT) | \$386,672 | \$0 | \$386,672 | | \$0.000 |
| Ratepayer Impact (RIM) | \$303,312 | \$1,456,672 | (\$1,153,359) | 0.21 | \$0.359 |
| Societal Cost (SCT) | \$360,659 | \$1,070,000 | (\$709,341) | 0.34 | \$0.264 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$1,070,000 | \$0 | \$0 | \$1,070,000 | |
| Electric Benefits (\$) | \$146,964 | \$0 | \$0 | \$303,312 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 2,100,267 | 0 | 0 | 4,200,533 | |
| Critical Peak Hour Demand (kW) | 768 | 0 | 0 | 768 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 436,528 | 0 | 0 | 871,519 | |
| Total On Peak Hours (%) | | | | 20.75% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | <u>Secondary Benefits</u> | | | | |
| Discount Rate: | 7.14% | Other Savings | | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | | | |
| Line Loss (Energy): | 4.77% | | | | |
| Line Loss (Demand): | 9.93% | | | | |
| Avoided T&D Capacity \$/MW: | \$52,165 | | | | |
| Environmental Adder (SCT only) | 10.00% | | | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.08% | | | | |
| Electric Retail Rate (\$/KWh): | \$0.10 | | | | |
| Gas Retail Rate (\$/therm) | \$0.62 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Assessments/In-home Energy Assessments Program Data Sheet

Sierra Input and Output Sheets

Sierra - Energy Assessments

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|---------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| Online | \$430,793 | \$42,780 | \$388,013 | 8,945 | 0 | 0 | 1.0 | 100.0% |
| In-home | \$245,707 | \$56,378 | \$189,330 | 796 | 76 | 60,325 | 2.0 | 100.0% |
| Total | \$676,501 | \$99,158 | \$577,343 | 9,741 | 6 | 60,325 | 2.0 | 100.0% |

| | | | |
|-------------------------|-------------------------|------------------------------|----------------------------------|
| Name: | 2020 Energy Assessments | Last Updated: | 5/25/2021 18:57 |
| Customer Sector: | Residential | Avg Measure Life: | |
| Region : | Reno | Energy Savings Curve: | Home Energy Assessments |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$8,699 | \$676,501 | (\$667,802) | 0.01 | \$5.425 |
| Total Resource Cost (TRC) | \$7,563 | \$676,501 | (\$668,937) | 0.01 | \$5.425 |
| Utility Cost Test (UCT) | \$7,563 | \$676,501 | (\$668,937) | 0.01 | \$5.425 |
| Participant Cost Test (PCT) | \$9,347 | \$0 | \$9,347 | | \$0.000 |
| Ratepayer Impact (RIM) | \$7,563 | \$685,848 | (\$678,284) | 0.01 | \$5.500 |
| Societal Cost (SCT) | \$8,976 | \$676,501 | (\$667,525) | 0.01 | \$5.425 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$676,501 | \$0 | \$0 | \$676,501 |
| Electric Benefits (\$) | \$3,889 | \$0 | \$0 | \$7,563 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 64,381 | 0 | 0 | 128,762 |
| Critical Peak Hour Demand (kW) | 22 | 0 | 0 | 22 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 4,406 | 0 | 0 | 28,113 |
| Total On Peak Hours (%) | | | | 21.83% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.01% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|--------------------|------------------------------|-----------------|
| Name: | Energy Assessments | Last Updated: | 5/24/2021 |
| Customer Sector: | Residential | Avg Measure Life: | 2.00 |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:05 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| Notes: | | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-------------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$8,699 | \$676,501 | (\$667,802) | 0.01 | \$5.254 |
| Total Resource Cost (TRC) | \$7,563 | \$676,501 | (\$668,937) | 0.01 | \$5.254 |
| Utility Cost Test (UCT) | \$7,563 | \$676,501 | (\$668,937) | 0.01 | \$5.254 |
| Participant Cost Test (PCT) | \$9,347 | \$0 | \$9,347 | | \$0.000 |
| Rate Payer Impact (RIM) | \$7,563 | \$685,848 | (\$678,284) | 0.01 | \$5.326 |
| Societal Cost (SCT) | \$8,976 | \$676,501 | (\$667,525) | 0.01 | \$5.254 |

*Includes Rebates Paid to Freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$676,501 | \$0 | \$0 | \$676,501 |
| Electric Benefit (\$) | \$3,889 | \$0 | \$0 | \$7,563 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 64,381 | 0 | 0 | 128,762 |
| Critical Peak Hour Demand (kW) | 22 | 0 | 0 | 22 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 4,385 | 0 | 0 | 8,769 |
| Total on Peak Hours (%) | | | | 6.81% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate | 6.75% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 6.30% | Measure Life | 100% |
| Line Loss (Demand) | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.01% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-to-Gross Ratio | 100.00% | | |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Assessments/In-home Energy Assessments Program Data Sheet**

Sierra - In-Home Energy Assessments

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| In-home | \$380,000 | \$90,476 | \$289,524 | 2,000 | 300 | 600,000 | 2.0 | 100.0% |
| Total | \$380,000 | \$90,476 | \$289,524 | 2,000 | 300 | 600,000 | 2.0 | 100.0% |

Sierra - In-Home Energy Assessments

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| In-home | \$380,000 | \$90,476 | \$289,524 | 2,000 | 300 | 600,000 | 2.0 | 100.0% |
| Total | \$380,000 | \$90,476 | \$289,524 | 2,000 | 300 | 600,000 | 2.0 | 100.0% |

Sierra - In-Home Energy Assessments

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Number of Participants | Annual Savings (kWh / unit) | Total Annual Savings (kWh) | Effective Useful Life | Net-to-Gross |
|--------------|------------------------------|---------------------|----------------------|------------------------|-----------------------------|----------------------------|-----------------------|---------------|
| In-home | \$380,000 | \$90,476 | \$289,524 | 2,000 | 300 | 600,000 | 2.0 | 100.0% |
| Total | \$380,000 | \$90,476 | \$289,524 | 2,000 | 300 | 600,000 | 2.0 | 100.0% |

| | | | |
|-------------------------|---------------------------------|------------------------------|----------------------------------|
| Name: | 2022 In-Home Energy Assessments | Last Updated: | 5/25/2021 19:07 |
| Customer Sector: | Residential | Avg Measure Life: | 2.00 |
| Region : | Reno | Energy Savings Curve: | IHEA |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$98,024 | \$380,000 | (\$281,976) | 0.26 | \$0.306 |
| Total Resource Cost (TRC) | \$85,229 | \$380,000 | (\$294,771) | 0.22 | \$0.306 |
| Utility Cost Test (UCT) | \$85,229 | \$380,000 | (\$294,771) | 0.22 | \$0.306 |
| Participant Cost Test (PCT) | \$92,965 | \$0 | \$92,965 | | \$0.000 |
| Ratepayer Impact (RIM) | \$85,229 | \$472,965 | (\$387,736) | 0.18 | \$0.381 |
| Societal Cost (SCT) | \$101,639 | \$380,000 | (\$278,361) | 0.27 | \$0.306 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$380,000 | \$0 | \$0 | \$380,000 |
| Electric Benefits (\$) | \$43,884 | \$0 | \$0 | \$85,229 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 640,342 | 0 | 0 | 1,280,683 |
| Critical Peak Hour Demand (kW) | 215 | 0 | 0 | 215 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 43,824 | 0 | 0 | 279,618 |
| Total On Peak Hours (%) | | | | 21.83% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.01% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Assessments/In-home Energy Assessments Program Data Sheet

| | | | |
|-------------------------|---------------------------------|------------------------------|----------------------------------|
| Name: | 2023 In-Home Energy Assessments | Last Updated: | 5/25/2021 19:15 |
| Customer Sector: | Residential | Avg Measure Life: | 2.00 |
| Region : | Reno | Energy Savings Curve: | IHEA |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| | | | | | |
|--|----------------------------------|--------------------------|---------------------------------|-----------------------------|---|
| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
| NEB Total Resource Cost (NTRC) | \$94,802 | \$380,000 | (\$285,198) | 0.25 | \$0.306 |
| Total Resource Cost (TRC) | \$82,428 | \$380,000 | (\$297,572) | 0.22 | \$0.306 |
| Utility Cost Test (UCT) | \$82,428 | \$380,000 | (\$297,572) | 0.22 | \$0.306 |
| Participant Cost Test (PCT) | \$92,965 | \$0 | \$92,965 | | \$0.000 |
| Ratepayer Impact (RIM) | \$82,428 | \$472,965 | (\$390,537) | 0.17 | \$0.381 |
| Societal Cost (SCT) | \$98,121 | \$380,000 | (\$281,879) | 0.26 | \$0.306 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$380,000 | \$0 | \$0 | \$380,000 | |
| Electric Benefits (\$) | \$44,135 | \$0 | \$0 | \$82,428 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 640,342 | 0 | 0 | 1,280,683 | |
| Critical Peak Hour Demand (kW) | 215 | 0 | 0 | 215 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 43,824 | 0 | 0 | 279,618 | |
| Total On Peak Hours (%) | | | | 21.83% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | <u>Secondary Benefits</u> | | | | |
| Discount Rate: | 6.75% | Other Savings | | | \$0 |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | | | |
| Line Loss (Energy): | 6.30% | Measure Life | | | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | | | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | | | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | | | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.01% | Incremental Measure Cost | | | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

| | | | |
|-------------------------|---------------------------------|------------------------------|----------------------------------|
| Name: | 2024 In-Home Energy Assessments | Last Updated: | 5/25/2021 19:24 |
| Customer Sector: | Residential | Avg Measure Life: | 2.00 |
| Region : | Reno | Energy Savings Curve: | IHEA |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| | | | | | |
|--|----------------------------------|--------------------------|---------------------------------|-----------------------------|---|
| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
| NEB Total Resource Cost (NTRC) | \$98,300 | \$380,000 | (\$281,700) | 0.26 | \$0.306 |
| Total Resource Cost (TRC) | \$85,469 | \$380,000 | (\$294,531) | 0.22 | \$0.306 |
| Utility Cost Test (UCT) | \$85,469 | \$380,000 | (\$294,531) | 0.22 | \$0.306 |
| Participant Cost Test (PCT) | \$92,965 | \$0 | \$92,965 | | \$0.000 |
| Ratepayer Impact (RIM) | \$85,469 | \$472,965 | (\$387,496) | 0.18 | \$0.381 |
| Societal Cost (SCT) | \$101,837 | \$380,000 | (\$278,163) | 0.27 | \$0.306 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$380,000 | \$0 | \$0 | \$380,000 | |
| Electric Benefits (\$) | \$40,877 | \$0 | \$0 | \$85,469 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 640,342 | 0 | 0 | 1,280,683 | |
| Critical Peak Hour Demand (kW) | 215 | 0 | 0 | 215 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 43,824 | 0 | 0 | 279,618 | |
| Total On Peak Hours (%) | | | | 21.83% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | <u>Secondary Benefits</u> | | | | |
| Discount Rate: | 6.75% | Other Savings | | | \$0 |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | | | |
| Line Loss (Energy): | 6.30% | Measure Life | | | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | | | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | | | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | | | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 15.01% | Incremental Measure Cost | | | 100% |
| Electric Retail Rate (\$/KWh): | \$0.08 | | | | |
| Gas Retail Rate (\$/therm) | \$0.39 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Non-Residential Services Programs

Section 7 – Non-Residential Services Programs

Non-Residential Services Overview

NV Energy's DSM Non-Residential Programs provide services for commercial, industrial, non-profits, and school customers. NV Energy divides business customers into two large sub-segments for outreach purposes: large customers and small/medium business customers. Large customers are typically single or aggregated electric customers with demand usage of over 500 kW, or national customers, such as fast-food chains. Large customers have an NV Energy account manager assigned to them to serve as a liaison. Small business customers work with our Business Solutions Center to answer any questions they may have on their accounts and to investigate potential energy efficiency projects.

The segment of Non-Residential Services is comprised of the Energy Smart Schools, Business Energy Services,⁷⁰ and Commercial DR (Build and Manage) programs and are augmented by the Energy Education program.

The proposed Non-Residential Services budgets and energy (kWh) and demand (kW) savings for the Programs for the 2022 through 2024 action plan period are provided in Table DSM-57 below.

⁷⁰ Previously named the Commercial Services Program in NV Energy's DSM IRP filing in Docket No. 18-06003.

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Non-Residential Services Programs

Table DSM-57: 2022-2024 Non-Residential Services Proposed Budgets and Savings Targets

| Programs | Proposed Budget | Annual Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Annual Demand Savings (kW) | Annual Energy Savings (kWh) | Proposed Budget | Annual Demand Savings (kW) | Annual Energy Savings (kWh) |
|---|---------------------|----------------------------|-----------------------------|---------------------|----------------------------|-----------------------------|---------------------|----------------------------|-----------------------------|
| Nevada Power | 2022 | | | 2023 | | | 2024 | | |
| Energy Smart Schools | \$1,350,000 | 5,289 | 14,500,000 | \$1,350,000 | 5,289 | 14,500,000 | \$1,350,000 | 5,289 | 14,500,000 |
| Business Energy Services | \$14,000,000 | 14,070 | 148,000,000 | \$14,000,000 | 14,070 | 148,000,000 | \$14,000,000 | 14,070 | 148,000,000 |
| Commercial Demand Response - Build & Manage | \$1,600,000 | 22,000 | 7,470,000 | \$1,700,000 | 24,000 | 7,240,000 | \$1,800,000 | 26,000 | 7,033,000 |
| Non-Residential Services Total | \$16,950,000 | 41,359 | 169,970,000 | \$17,050,000 | 43,359 | 169,740,000 | \$17,150,000 | 45,359 | 169,533,000 |
| Sierra | 2022 | | | 2023 | | | 2024 | | |
| Energy Smart Schools | \$770,000 | 1,005 | 9,000,000 | \$770,000 | 1,005 | 9,000,000 | \$770,000 | 1,005 | 9,000,000 |
| Business Energy Services | \$5,700,000 | 5,984 | 71,300,000 | \$5,700,000 | 5,984 | 71,300,000 | \$5,700,000 | 5,984 | 71,300,000 |
| Commercial Demand Response - Build & Manage | \$990,000 | 4,017 | 1,105,000 | \$1,070,000 | 7,000 | 1,385,000 | \$1,070,000 | 8,000 | 1,637,000 |
| Non-Residential Services Total | \$7,460,000 | 11,006 | 81,405,000 | \$7,540,000 | 13,989 | 81,685,000 | \$7,540,000 | 14,989 | 81,937,000 |
| NV Energy | 2022 | | | 2023 | | | 2024 | | |
| Energy Smart Schools | \$2,120,000 | 6,294 | 23,500,000 | \$2,120,000 | 6,294 | 23,500,000 | \$2,120,000 | 6,294 | 23,500,000 |
| Business Energy Services | \$19,700,000 | 20,054 | 219,300,000 | \$19,700,000 | 20,054 | 219,300,000 | \$19,700,000 | 20,054 | 219,300,000 |
| Commercial Demand Response - Build & Manage | \$2,590,000 | 26,017 | 8,575,000 | \$2,770,000 | 31,000 | 8,625,000 | \$2,870,000 | 34,000 | 8,670,000 |
| Non-Residential Services Total | \$24,410,000 | 52,365 | 251,375,000 | \$24,590,000 | 57,348 | 251,425,000 | \$24,690,000 | 60,348 | 251,470,000 |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Smart Schools Program Data Sheet**

2020-2024 Energy Smart Schools Program

Description

The Energy Smart Schools program (“Program”) is designed to facilitate energy efficiency improvements, peak demand reduction, and provide CEI in Nevada’s public schools that include kindergarten through grade 12 and higher education institutions. The Program offers two types of energy services to school administrators: rebates that help to offset a portion of the costs associated with efficiency investments for energy efficiency projects; and, a high level of technical assistance that serves to offset the staffing needs for school facility management that would be required for administering energy efficiency projects.

New construction projects that are built in excess of code minimum efficiency requirements, as well as energy efficiency retrofit projects, receive cash rebates. These rebates are designed to encourage participation by helping offset a portion of the costs associated with improvements. For schools that participate in CEI and incur additional costs by using third-party vendor assistance, the Program offers a rebate to help offset a portion of the costs associated with the vendor provided assistance.

Continuous energy improvement provides a walk-through energy assessment, energy benchmarking, and energy efficiency training to participating schools. This training focuses on low-cost and no-cost improvements to facilities, while assisting facility staff in identifying capital projects that can lead to long term energy efficiency savings.

The technical assistance provided varies based on the needs of any given school or school district. The Program supports the school by helping to identify qualifying projects, provide assessment of program viability, and calculate energy and cost savings. The Program also provides energy savings verification, assists with the school district’s internal communications to management, retrofit specification design assistance, along with oversight and assistance with project management activities.

2020 Results

The expenditures, demand and energy savings, and participant results for the Program for the 2020 program year are provided in Table DSM-58 below.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Smart Schools Program Data Sheet**

Table DSM-58: 2020 Energy Smart Schools Expenditures, Savings, and Unit Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Units | | |
|-------------------------------|--------------------|--------------------|----------------------------------|-------------------|-------------------|----------------------------------|--------------|--------------|----------------------------------|---------------|---------------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Energy Smart Schools | \$1,500,000 | \$1,314,037 | (12.4%) | 11,450,382 | 21,465,369 | 87.5% | 2,517 | 5,358 | 112.8% | 11,450 | 21,465 | 87.5% |
| Sierra | | | | | | | | | | | | |
| Energy Smart Schools | \$800,000 | \$824,436 | 3.1% | 7,272,727 | 7,304,280 | 0.4% | 1,124 | 1,272 | 13.2% | 7,273 | 7,304 | 0.4% |
| NV Energy | \$2,300,000 | \$2,138,474 | (7.0%) | 18,723,109 | 28,769,649 | 53.7% | 3,641 | 6,630 | 82.1% | 18,723 | 28,770 | 53.7% |

2020 Overall Results and Activities

In Nevada Power’s service territory, 465 projects were completed, which achieved 21,465,369 kWh in savings or 187 percent of its energy savings target and 5,358 kW or 213 percent of its demand target, while expending 88 percent of the approved budget. In Sierra’s service territory 103 projects were completed, which achieved 7,304,280 kWh in savings or 100 percent of its energy savings target, and 1,272 kW or 113 percent of its demand target, while expending 103 percent of the approved budget.

The Program employed an approach that required participating customers to submit proposed projects with supporting documentation for current equipment and proposed equipment associated costs. Participants were required to answer questions on operating hours, allow on-site inspections to verify current equipment on retrofit projects, and allow the installation of energy-efficient measures to confirm energy savings. Photos were taken as part of supporting documentation for the projects. The Program provided increased work for contractors with work crews, engineers, project managers, equipment manufacturers, hazardous waste disposal service, waste disposal service, and energy service companies.

For 2020, initial CEI efforts were targeting 4 million kWh at Clark County School District (“CCSD”); however, when the COVID-19 pandemic led to a shutdown of schools in March, the Program’s team quickly realized the negative impact this would have on traditional energy efficiency projects, and began working with CCSD to maximize operational savings at their facilities. CCSD’s energy and sustainability manager worked closely with the Program’s team and the year-end results reflect in the Program’s achievement of kWh savings well beyond the year’s target.

As in previous program years, Washoe County School District continued their high level of involvement as they completed the third and final year of their district-wide performance contracting project. This high level of effort helped the Program meet this year’s increased kWh target.

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Sierra Pacific Power Companies d/b/a NV Energy
Energy Smart Schools Program Data Sheet**

2020 Lessons Learned and Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years:

- With CEI becoming more prevalent throughout Schools Programs, ADM recommends a CEI quarterly pre-review. This would give an opportunity for ADM and the implementer to discuss different modeling methods and input variables. These quarterly reviews would allow for a more thorough analysis and timely delivery of final Program results.
- With the introduction of the IECC 2018 building code as a baseline for new construction projects in Nevada, ADM recommends that the implementation contractor and ADM discuss how to interpret the new code. It was found that ADM and implementation contractor use different methodology when interpreting this code. This will help moving forward with the Program when reviewing new construction lighting projects.

2021 Plan

The authorized budgets, projected demand and energy savings targets, and participant goals for the Program for the 2021 program year are provided in Table DSM-59 below.

Table DSM-59: 2021 Energy Smart Schools Authorized Budgets, Savings Targets, and Unit Goals

| 2021 Program Components | Authorized Budget Goal | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Units Goal |
|--------------------------------|-------------------------------|--|---|-------------------|
| Nevada Power | | | | |
| Energy Smart Schools | \$1,500,000 | 1,885 | 12,500,000 | 12,500 |
| Sierra | | | | |
| Energy Smart Schools | \$800,000 | 923 | 8,500,000 | 8,500 |
| NV Energy | \$2,300,000 | 2,808 | 21,000,000 | 21,000 |

In 2021, the Program continues to provide technical services to assist educational institutions in developing and implementing energy efficiency projects and provide project rebates that help make those projects more affordable. As costs for energy-efficient projects are reduced, the dollars saved can be made available to serve the other needs of the schools.

To offset the school district's budget restrictions, CEI will be introduced to a more significant number of schools in 2021, with Washoe County School District being specifically targeted in Sierra's northern territory as an effort to maintain their high level of participation.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Smart Schools Program Data Sheet**

The Program will continue to closely monitor school activities related to COVID-19 and how related school closures might affect overall programmatic activities. Current retrofit plans and budgets may continue to be altered as schools use resources to address the pandemic.

2021 Plan Changes

The Program remains committed to finding new and unique ways to pursue operational and behavioral approaches, along with traditional energy-efficient measures. These types of cost-reducing efforts will continue to be of greater importance during COVID-related unprecedented times and while keeping the safety of everyone involved as a top priority.

The Program has expanded CEI efforts to the school districts in the north, giving those schools the ability to not only learn about their energy consumption, but become more energy efficient.

2022-2024 Proposed Plans

The proposed budget, projected demand and energy savings, and participant goals for the Program for the 2022 through 2024 program years are provided in Table DSM-60 below.

Table DSM-60: 2022 – 2024 Energy Smart Schools Proposed Budgets, Savings Targets, and Unit Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Units Goal |
|---------------------------|------------------------|--|---|-------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Energy Smart Schools | \$1,350,000 | 5,289 | 14,500,000 | 14,500 |
| Sierra | | | | |
| Energy Smart Schools | \$770,000 | 1,005 | 9,000,000 | 100 |
| NV Energy | \$2,120,000 | 6,294 | 23,500,000 | 14,600 |
| 2023 | | | | |
| Nevada Power | | | | |
| Energy Smart Schools | \$1,350,000 | 5,289 | 14,500,000 | 14,500 |
| Sierra | | | | |
| Energy Smart Schools | \$770,000 | 1,005 | 9,000,000 | 9,000 |
| NV Energy | \$2,120,000 | 6,294 | 23,500,000 | 23,500 |
| 2024 | | | | |
| Nevada Power | | | | |
| Energy Smart Schools | \$1,350,000 | 5,289 | 14,500,000 | 14,500 |
| Sierra | | | | |
| Energy Smart Schools | \$770,000 | 1,005 | 9,000,000 | 9,000 |
| NV Energy | \$2,120,000 | 6,294 | 23,500,000 | 23,500 |

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Smart Schools Program Data Sheet

The implementation process for the Program will consist of four major components: outreach, technical assistance, CEI and rebate processing. Outreach activities will be designed to create interactive awareness, inform school staff about the Program's benefits, and identify potential Program opportunities. Technical assistance will cover a broad range of activities and include facility assessments, energy use benchmarking, energy-savings calculations, and energy-efficient measure procurement support. CEI training focuses on low-cost and no-cost improvements to facilities, while assisting facility staff in identifying capital projects that can lead to long term energy efficiency savings. Rebate processing will confirm that qualifying energy-efficient measures are installed or implemented. This entire process will consist of documentation reviews and on-site inspections, based on the 2020 program year lessons learned.

The Program will continue to implement effective practices from previous years. The NV Energy team will conduct routine staff meetings to track program goals, monitor short-term and long-term objectives, and assign deliverables to team members. Reports will be submitted by the implementation contractor to provide data on activities, as well as demonstrate program performance relative to goals.

The Program will also partner with the Energy Education and the Low Income programs to facilitate energy efficiency education for low-income parents whose children attend low-income zip code schools. This collaboration will be known as "income qualifying educational events" and will take place once every quarter. This will allow the Program to collaborate with other NV Energy programs, develop a personal relationship with each school that participates in the events, and help better educate customers. The income qualifying educational events will travel to low-income zip code schools and set up a booth in the gymnasium, where parents can visit in-person and have an opportunity to apply for NV Energy programs, obtain information about how to become more energy efficient, as well as learn how the Program has helped the school become more energy efficient.

The Program will join forces with the Energy Education program to create engaging, fun and educational energy efficiency trainings for both the school's faculty and students. These trainings will be distributed to teachers, in the schools who opt to participate. The teachers will discuss the energy efficient tips and educational information, with students and give them tasks to perform both in the classroom and at home. This synergy will not only allow teachers to be more energy efficient in the classroom by getting the students involved and participating in the energy efficiency tips but will also provide the students a resource to take home and share with their family members.

The Program will host virtual and in-person lunch and learns to school facility staff and faculty. These lunch and learns will spotlight all the benefits the schools can receive from the Program, the work CEI has done with different schools, inform about the energy efficiency trainings with the students and teachers, and the income qualifying educational events.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Energy Smart Schools Program Data Sheet**

2022-2024 Proposed Plan Enhancements

The following are the proposed Program plan enhancements that will be considered during the 2022 through 2024 program years:

- Identify synergies with other programs offered by the Companies,
- Continue to expand CEI offering,
- Begin outreach efforts within the schools by hosting lunch and learns,
- Develop relationships with each individual school,
- Promote additional volunteer events within the schools to help the school spend less in lighting retrofit and help the Program achieve its kWh goal.

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-12 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-12 and DSM-17, which are calculated by the third-party evaluator ADM.

Incremental Costs

Incremental cost is the cost of the energy-efficient measure minus the cost of the baseline measure. Establishing the appropriate baseline generally defines the incremental cost. Lighting upgrades are generally considered early replacement as most of the work completed replaces functional but inefficient lighting. Occupancy sensors or light sensors fall under the controls scenario and the incremental cost is the full cost for the control measures. Air conditioner replacements are generally not made solely for energy efficiency considerations. They are considered replacement on burnout with the incremental costs being the difference in cost between the energy-efficient measure and the baseline measure.

Incentives/Rebates

The rebates are paid directly to a participating school or school district participant to offset the out-of-pocket expenditures after the Program team verifies that the energy-efficient measures have been installed and are operational.

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Smart Schools Program Data Sheet

Measure Life

As determined in the M&V Report, the EUL for this Program was 3.2 years for Nevada Power and 12 years for Sierra.

Measure Units

The analysis of this Program has been performed using a derived unit because it includes a multitude of energy-efficient measures. The unit of measure for a derived unit for this Program is based on 1,000 kWh per unit. The 1,000 kWh unit is derived from measures with different unit sizes (e.g. square foot of window film, number of fixtures installed, and watts reduced). Such differences make comparisons and energy efficiency computations by units installed extremely difficult and the entry of all measures in the financial modeling impractical.

Savings

Per unit savings are based on a derived unit of 1,000 kWh.

Financial Analysis

Financial assumptions are provided in Section 4 of the DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program had an overall cost effectiveness NTRC score for 2020 of 0.99 for Nevada Power and 0.66 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 1.28 for 2022, 1.30 for 2023, and 1.27 for 2024 for Nevada Power and for Sierra 0.80 for 2022, 0.81 for 2023, and 0.79 for 2024.

Nevada Power Input and Output Sheets

Nevada Power - Energy Efficient Schools

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|-----------------|---------------------------|---------------------|----------------------|------------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$1,314,037 | \$156,027 | \$1,113,385 | \$44,625 | | | | | | |
| CEI* | | | | | 17,773 | 1,000 | 17,772,511 | 1.00 | \$0 | 100.0% |
| School Measures | | | | | 3,693 | 1,000 | 3,692,858 | 14.00 | \$392 | 82.0% |
| Total | | | | | 21,465 | 1,000 | 21,465,369 | 3.2 | \$67 | 96.9% |

*Continuous Energy Improvement (CEI)

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Smart Schools Program Data Sheet

| | | | |
|-------------------------|--------------|------------------------------|-----------------------------------|
| Name: | 2020 Schools | Last Updated: | 5/25/2021 19:55 |
| Customer Sector: | Commercial | Avg Measure Life: | 2.89 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$2,466,254 | \$2,500,434 | (\$34,180) | 0.99 | \$0.052 |
| Total Resource Cost (TRC) | \$2,242,049 | \$2,500,434 | (\$258,385) | 0.90 | \$0.052 |
| Utility Cost Test (UCT) | \$2,242,049 | \$1,314,037 | \$928,011 | 1.71 | \$0.027 |
| Participant Cost Test (PCT) | \$3,690,614 | \$1,446,825 | \$2,243,789 | 2.55 | \$0.026 |
| Ratepayer Impact (RIM) | \$2,242,049 | \$4,527,682 | (\$2,285,633) | 0.50 | \$0.094 |
| Societal Cost (SCT) | \$2,572,308 | \$2,500,434 | \$71,874 | 1.03 | \$0.052 |

**Includes rebates paid to freeriders*

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,314,037 | \$0 | \$0 | \$1,314,037 |
| Electric Benefits (\$) | \$1,159,785 | \$0 | \$0 | \$2,242,049 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 21,843,461 | 0 | 0 | 63,182,871 |
| Critical Peak Hour Demand (kW) | 6,044 | 0 | 0 | 6,044 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 2,897,165 | 0 | 0 | 6,720,281 |
| Total On Peak Hours (%) | | | | 10.64% |

**Savings in this section are adjusted for line loss and net-to-gross*

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 88.1% | | |

| | | | |
|-------------------------|-----------------|------------------------------|-----------------|
| Name: | Schools Program | Last Updated: | 5/24/2021 |
| Customer Sector: | Commercial | Avg Measure Life: | 3.24 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:52 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| | | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$2,466,252 | \$2,500,438 | (\$34,186) | 0.99 | \$0.036 |
| Total Resource Cost (TRC) | \$2,242,047 | \$2,500,438 | (\$258,391) | 0.90 | \$0.036 |
| Utility Cost Test (UCT) | \$2,242,047 | \$1,314,037 | \$928,010 | 1.71 | \$0.019 |
| Participant Cost Test (PCT) | \$3,690,614 | \$1,446,830 | \$2,243,783 | 2.55 | \$0.021 |
| Rate Payer Impact (RIM) | \$2,242,047 | \$4,527,682 | (\$2,285,635) | 0.50 | \$0.066 |
| Societal Cost (SCT) | \$2,582,911 | \$2,500,438 | \$82,473 | 1.03 | \$0.036 |

**Includes Rebates Paid to Freeriders*

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,314,037 | \$0 | \$0 | \$1,314,037 |
| Electric Benefit (\$) | \$1,159,783 | \$0 | \$0 | \$2,242,047 |
| Gas Benefit (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 21,843,461 | 0 | 0 | 70,696,217 |
| Critical Peak Hour Demand (kW) | 6,044 | 0 | 0 | 6,044 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 2,023,302 | 0 | 0 | 6,548,404 |
| Total on Peak Hours (%) | | | | 9.26% |

**Savings in this Section are Adjusted for Line Loss and Net-to-Gross*

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-to-Gross Ratio | 96.9% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Smart Schools Program Data Sheet

Nevada Power - Energy Smart Schools

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kW h/unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|------------------|------------------------------|---------------------|----------------------|------------|-----------|-----------------|------------------|----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$1,350,000 | \$184,879 | \$299,393 | \$0 | \$865,728 | | | | | | | |
| CEI* | | | | | \$0 | 11,100 | \$0 | 1,000 | 11,100,000 | 1.0 | \$0.00 | 100.0% |
| Capital Projects | | | | | \$865,728 | 3,400 | \$255 | 1,000 | 3,400,000 | 14.0 | \$391.79 | 82.0% |
| Total | | | | | \$865,728 | 14,500 | \$60 | 1,000 | 14,500,000 | 4.0 | \$91.87 | 95.8% |

*Continuous Energy Improvement (CEI)

Nevada Power - Energy Smart Schools

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kW h/unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|------------------|------------------------------|---------------------|----------------------|------------|-----------|-----------------|------------------|----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$1,350,000 | \$184,879 | \$299,393 | \$0 | \$865,728 | | | | | | | |
| CEI* | | | | | \$0 | 11,100 | \$0 | 1,000 | 11,100,000 | 1.0 | \$0.00 | 100.0% |
| Capital Projects | | | | | \$865,728 | 3,400 | \$255 | 1,000 | 3,400,000 | 14.0 | \$391.79 | 82.0% |
| Total | | | | | \$865,728 | 14,500 | \$60 | 1,000 | 14,500,000 | 4.0 | \$91.87 | 95.8% |

*Continuous Energy Improvement (CEI)

Nevada Power - Energy Smart Schools

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kW h/unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|------------------|------------------------------|---------------------|----------------------|------------|-----------|-----------------|------------------|----------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$1,350,000 | \$184,879 | \$299,393 | \$0 | \$865,728 | | | | | | | |
| CEI* | | | | | \$0 | 11,100 | \$0 | 1,000 | 11,100,000 | 1.0 | \$0.00 | 100.0% |
| Capital Projects | | | | | \$865,728 | 3,400 | \$255 | 1,000 | 3,400,000 | 14.0 | \$391.79 | 82.0% |
| Total | | | | | \$865,728 | 14,500 | \$60 | 1,000 | 14,500,000 | 4.0 | \$91.87 | 95.8% |

*Continuous Energy Improvement (CEI)

| | | | |
|-------------------------|--------------|------------------------------|-----------------------------------|
| Name: | 2022 Schools | Last Updated: | 5/25/2021 20:06 |
| Customer Sector: | Commercial | Avg Measure Life: | 3.61 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$2,214,303 | \$1,732,416 | \$481,886 | 1.28 | \$0.045 |
| Total Resource Cost (TRC) | \$2,013,002 | \$1,732,416 | \$280,586 | 1.16 | \$0.045 |
| Utility Cost Test (UCT) | \$2,013,002 | \$1,350,014 | \$662,988 | 1.49 | \$0.035 |
| Participant Cost Test (PCT) | \$3,854,174 | \$1,332,086 | \$2,522,088 | 2.89 | \$0.030 |
| Ratepayer Impact (RIM) | \$2,013,002 | \$3,940,389 | (\$1,927,386) | 0.51 | \$0.101 |
| Societal Cost (SCT) | \$2,304,433 | \$1,732,416 | \$572,017 | 1.33 | \$0.045 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,350,014 | \$0 | \$0 | \$1,350,014 |
| Electric Benefits (\$) | \$966,185 | \$0 | \$0 | \$2,013,002 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 14,584,252 | 0 | 0 | 52,645,286 |
| Critical Peak Hour Demand (kW) | 5,289 | 0 | 0 | 5,289 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 2,212,998 | 0 | 0 | 5,733,203 |
| Total On Peak Hours (%) | | | | 10.89% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 86.7% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Smart Schools Program Data Sheet

| | | | |
|-------------------------|--------------|------------------------------|-----------------------------------|
| Name: | 2023 Schools | Last Updated: | 5/25/2021 20:15 |
| Customer Sector: | Commercial | Avg Measure Life: | 3.61 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$2,246,887 | \$1,732,416 | \$514,471 | 1.30 | \$0.045 |
| Total Resource Cost (TRC) | \$2,042,625 | \$1,732,416 | \$310,208 | 1.18 | \$0.045 |
| Utility Cost Test (UCT) | \$2,042,625 | \$1,350,014 | \$692,610 | 1.51 | \$0.035 |
| Participant Cost Test (PCT) | \$3,854,174 | \$1,332,086 | \$2,522,088 | 2.89 | \$0.030 |
| Ratepayer Impact (RIM) | \$2,042,625 | \$3,940,389 | (\$1,897,764) | 0.52 | \$0.101 |
| Societal Cost (SCT) | \$2,337,674 | \$1,732,416 | \$605,258 | 1.35 | \$0.045 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,350,014 | \$0 | \$0 | \$1,350,014 |
| Electric Benefits (\$) | \$972,744 | \$0 | \$0 | \$2,042,625 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 14,584,252 | 0 | 0 | 52,645,286 |
| Critical Peak Hour Demand (kW) | 5,289 | 0 | 0 | 5,289 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 2,212,998 | 0 | 0 | 5,733,203 |
| Total On Peak Hours (%) | | | | 10.89% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 86.7% | | |

| | | | |
|-------------------------|--------------|------------------------------|-----------------------------------|
| Name: | 2024 Schools | Last Updated: | 5/25/2021 20:22 |
| Customer Sector: | Commercial | Avg Measure Life: | 3.61 |
| Region : | Vegas | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$2,207,970 | \$1,732,416 | \$475,554 | 1.27 | \$0.045 |
| Total Resource Cost (TRC) | \$2,007,246 | \$1,732,416 | \$274,829 | 1.16 | \$0.045 |
| Utility Cost Test (UCT) | \$2,007,246 | \$1,350,014 | \$657,231 | 1.49 | \$0.035 |
| Participant Cost Test (PCT) | \$3,854,174 | \$1,332,086 | \$2,522,088 | 2.89 | \$0.030 |
| Ratepayer Impact (RIM) | \$2,007,246 | \$3,940,389 | (\$1,933,143) | 0.51 | \$0.101 |
| Societal Cost (SCT) | \$2,293,841 | \$1,732,416 | \$561,425 | 1.32 | \$0.045 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,350,014 | \$0 | \$0 | \$1,350,014 |
| Electric Benefits (\$) | \$902,392 | \$0 | \$0 | \$2,007,246 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 14,584,252 | 0 | 0 | 52,645,286 |
| Critical Peak Hour Demand (kW) | 5,289 | 0 | 0 | 5,289 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 2,212,998 | 0 | 0 | 5,733,203 |
| Total On Peak Hours (%) | | | | 10.89% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 86.7% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Smart Schools Program Data Sheet

Sierra Input and Output Sheets

Sierra - Energy Efficient Schools

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Number of Units | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|-----------------|---------------------------|---------------------|----------------------|------------|-----------------|---------------------------|----------------------------|-----------------------|-----------------------------------|--------------|
| Measures | \$824,436 | \$82,096 | \$642,202 | \$100,138 | | | | | | |
| School Measures | | | | | 7,304 | 1,000 | 7,304,280 | 12.0 | \$371 | 83.0% |
| Total | | | | | 7,304 | 1,000 | 7,304,280 | 12.0 | \$371 | 83.0% |

| | | | |
|-------------------------|--------------|------------------------------|----------------------------------|
| Name: | 2020 Schools | Last Updated: | 5/25/2021 19:00 |
| Customer Sector: | Commercial | Avg Measure Life: | 12.00 |
| Region : | Reno | Energy Savings Curve: | Schools |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$2,033,499 | \$3,074,310 | (\$1,040,811) | 0.66 | \$0.055 |
| Total Resource Cost (TRC) | \$1,848,635 | \$3,074,310 | (\$1,225,675) | 0.60 | \$0.055 |
| Utility Cost Test (UCT) | \$1,848,635 | \$824,436 | \$1,024,199 | 2.24 | \$0.015 |
| Participant Cost Test (PCT) | \$3,866,055 | \$2,710,691 | \$1,155,364 | 1.43 | \$0.040 |
| Ratepayer Impact (RIM) | \$1,848,635 | \$3,950,148 | (\$2,101,513) | 0.47 | \$0.071 |
| Societal Cost (SCT) | \$2,155,053 | \$3,074,310 | (\$919,258) | 0.70 | \$0.055 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$824,436 | \$0 | \$0 | \$824,436 |
| Electric Benefits (\$) | \$195,728 | \$0 | \$0 | \$1,848,635 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 6,470,173 | 0 | 0 | 77,642,080 |
| Critical Peak Hour Demand (kW) | 592 | 0 | 0 | 592 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 405,398 | 0 | 0 | 9,490,812 |
| Total On Peak Hours (%) | | | | 12.22% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-To-Gross Ratio | 83.0% | | |

| | | | |
|-------------------------|-----------------|------------------------------|-----------------|
| Name: | Schools Program | Last Updated: | 5/24/2021 |
| Customer Sector: | Commercial | Avg Measure Life: | 12.00 |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:04 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| Notes: | | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-------------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$2,033,499 | \$3,074,322 | (\$1,040,823) | 0.66 | \$0.040 |
| Total Resource Cost (TRC) | \$1,848,635 | \$3,074,322 | (\$1,225,686) | 0.60 | \$0.040 |
| Utility Cost Test (UCT) | \$1,848,635 | \$824,436 | \$1,024,199 | 2.24 | \$0.011 |
| Participant Cost Test (PCT) | \$3,866,055 | \$2,710,705 | \$1,155,350 | 1.43 | \$0.035 |
| Rate Payer Impact (RIM) | \$1,848,635 | \$3,950,148 | (\$2,101,513) | 0.47 | \$0.051 |
| Societal Cost (SCT) | \$2,155,053 | \$3,074,322 | (\$919,269) | 0.70 | \$0.040 |

*Includes Rebates Paid to Freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$824,436 | \$0 | \$0 | \$824,436 |
| Electric Benefit (\$) | \$195,728 | \$0 | \$0 | \$1,848,635 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 6,470,173 | 0 | 0 | 77,642,080 |
| Critical Peak Hour Demand (kW) | 592 | 0 | 0 | 592 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 404,806 | 0 | 0 | 4,857,674 |
| Total on Peak Hours (%) | | | | 6.26% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate | 6.75% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 6.30% | Measure Life | 100% |
| Line Loss (Demand) | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-to-Gross Ratio | 83.00% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Smart Schools Program Data Sheet

Sierra - Energy Smart Schools

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|-----------------|------------------------------|---------------------|----------------------|------------|------------------|-----------------|------------------|---------------------------|----------------------------|-----------------------|-----------------------------------|---------------|
| Measures | \$770,000 | \$75,425 | \$413,570 | \$0 | \$281,005 | | | | | | | |
| CEI* | | | | | \$0 | 7,000 | \$0 | 1,000 | 7,000,000 | 1.0 | \$0 | 100.0% |
| School Measures | | | | | \$281,005 | 2,000 | \$141 | 1,000 | 2,000,000 | 12.0 | \$371 | 100.0% |
| Total | | | | | \$281,005 | 9,000 | \$31 | 1,000 | 9,000,000 | 3.4 | \$82 | 100.0% |

*Continuous Energy Improvement (CEI)

Sierra - Energy Smart Schools

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|-----------------|------------------------------|---------------------|----------------------|------------|------------------|-----------------|------------------|---------------------------|----------------------------|-----------------------|-----------------------------------|---------------|
| Measures | \$770,000 | \$75,425 | \$413,570 | \$0 | \$281,005 | | | | | | | |
| CEI* | | | | | \$0 | 7,000 | \$0 | 1,000 | 7,000,000 | 1.0 | \$0 | 100.0% |
| School Measures | | | | | \$281,005 | 2,000 | \$141 | 1,000 | 2,000,000 | 12.0 | \$371 | 100.0% |
| Total | | | | | \$281,005 | 9,000 | \$31 | 1,000 | 9,000,000 | 3.4 | \$82 | 100.0% |

*Continuous Energy Improvement (CEI)

Sierra - Energy Smart Schools

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh/unit) | Total Annual Savings (kWh) | Effective Useful Life | Incremental Measure Cost per Unit | Net-to-Gross |
|-----------------|------------------------------|---------------------|----------------------|------------|------------------|-----------------|------------------|---------------------------|----------------------------|-----------------------|-----------------------------------|---------------|
| Measures | \$770,000 | \$75,425 | \$413,570 | \$0 | \$281,005 | | | | | | | |
| CEI* | | | | | \$0 | 7,000 | \$0 | 1,000 | 7,000,000 | 1.0 | \$0 | 100.0% |
| School Measures | | | | | \$281,005 | 2,000 | \$141 | 1,000 | 2,000,000 | 12.0 | \$371 | 100.0% |
| Total | | | | | \$281,005 | 9,000 | \$31 | 1,000 | 9,000,000 | 3.4 | \$82 | 100.0% |

*Continuous Energy Improvement (CEI)

| | | | |
|-------------------------|--------------|------------------------------|----------------------------------|
| Name: | 2022 Schools | Last Updated: | 5/25/2021 19:12 |
| Customer Sector: | Commercial | Avg Measure Life: | 3.44 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$986,281 | \$1,231,215 | (\$244,934) | 0.80 | \$0.048 |
| Total Resource Cost (TRC) | \$896,619 | \$1,231,215 | (\$334,596) | 0.73 | \$0.048 |
| Utility Cost Test (UCT) | \$896,619 | \$769,995 | \$126,624 | 1.16 | \$0.030 |
| Participant Cost Test (PCT) | \$1,732,154 | \$742,220 | \$989,934 | 2.33 | \$0.029 |
| Ratepayer Impact (RIM) | \$896,619 | \$2,221,149 | (\$1,324,530) | 0.40 | \$0.086 |
| Societal Cost (SCT) | \$1,044,341 | \$1,231,215 | (\$186,874) | 0.85 | \$0.048 |

*Includes rebates paid to free riders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-----------|------|------|---------------|
| Total Utility Investment (\$) | \$769,995 | \$0 | \$0 | \$769,995 |
| Electric Benefits (\$) | \$324,939 | \$0 | \$0 | \$896,619 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 9,605,123 | 0 | 0 | 33,084,312 |
| Critical Peak Hour Demand (kW) | 1,005 | 0 | 0 | 1,005 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 887,250 | 0 | 0 | 4,176,598 |
| Total On Peak Hours (%) | | | | 12.62% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | Secondary Benefits |
|---|--------------------------|
| Discount Rate: | 6.75% |
| Rate Escalator: | 0.00% |
| Inflation Rate (T&D): | 2.00% |
| Line Loss (Energy): | 6.30% |
| Line Loss (Demand): | 14.31% |
| Avoided T&D Capacity \$/MW: | \$46,748 |
| Environmental Adder (SCT only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% |
| Electric Retail Rate (\$/KWh): | \$0.06 |
| Gas Retail Rate (\$/therm) | \$0.42 |
| Net-To-Gross Ratio | 100.0% |
| | Other Savings |
| | \$0 |
| | Scenarios: |
| | Measure Life |
| | 100% |
| | Energy Savings |
| | 100% |
| | Avoided Energy Cost |
| | 100% |
| | Avoided Capacity Cost |
| | 100% |
| | Incremental Measure Cost |
| | 100% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Energy Smart Schools Program Data Sheet

| | | | |
|-------------------------|--------------|------------------------------|----------------------------------|
| Name: | 2023 Schools | Last Updated: | 5/25/2021 19:19 |
| Customer Sector: | Commercial | Avg Measure Life: | 3.44 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|----------------------|---------------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$996,186 | \$1,231,215 | (\$235,029) | 0.81 | \$0.048 |
| Total Resource Cost (TRC) | \$905,623 | \$1,231,215 | (\$325,592) | 0.74 | \$0.048 |
| Utility Cost Test (UCT) | \$905,623 | \$769,995 | \$135,628 | 1.18 | \$0.030 |
| Participant Cost Test (PCT) | \$1,732,154 | \$742,220 | \$989,934 | 2.33 | \$0.029 |
| Ratepayer Impact (RIM) | \$905,623 | \$2,221,149 | (\$1,315,525) | 0.41 | \$0.086 |
| Societal Cost (SCT) | \$1,054,348 | \$1,231,215 | (\$176,867) | 0.86 | \$0.048 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$769,995 | \$0 | \$0 | \$769,995 | |
| Electric Benefits (\$) | \$323,614 | \$0 | \$0 | \$905,623 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 9,605,123 | 0 | 0 | 33,084,312 | |
| Critical Peak Hour Demand (kW) | 1,005 | 0 | 0 | 1,005 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 887,250 | 0 | 0 | 4,176,598 | |
| Total On Peak Hours (%) | | | | 12.62% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | | <u>Secondary Benefits</u> | | | |
| Discount Rate: | 6.75% | Other Savings | \$0 | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | | | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% | | |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% | | |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% | | |
| Electric Retail Rate (\$/KWh): | \$0.06 | | | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

| | | | |
|-------------------------|--------------|------------------------------|----------------------------------|
| Name: | 2024 Schools | Last Updated: | 5/25/2021 19:29 |
| Customer Sector: | Commercial | Avg Measure Life: | 3.44 |
| Region : | Reno | Energy Savings Curve: | Multiple |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|----------------------|---------------------------|--------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$968,147 | \$1,231,215 | (\$263,068) | 0.79 | \$0.048 |
| Total Resource Cost (TRC) | \$880,134 | \$1,231,215 | (\$351,081) | 0.71 | \$0.048 |
| Utility Cost Test (UCT) | \$880,134 | \$769,995 | \$110,139 | 1.14 | \$0.030 |
| Participant Cost Test (PCT) | \$1,732,154 | \$742,220 | \$989,934 | 2.33 | \$0.029 |
| Ratepayer Impact (RIM) | \$880,134 | \$2,221,149 | (\$1,341,015) | 0.40 | \$0.086 |
| Societal Cost (SCT) | \$1,023,067 | \$1,231,215 | (\$208,148) | 0.83 | \$0.048 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$769,995 | \$0 | \$0 | \$769,995 | |
| Electric Benefits (\$) | \$277,453 | \$0 | \$0 | \$880,134 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 9,605,123 | 0 | 0 | 33,084,312 | |
| Critical Peak Hour Demand (kW) | 1,005 | 0 | 0 | 1,005 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 887,250 | 0 | 0 | 4,176,598 | |
| Total On Peak Hours (%) | | | | 12.62% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | | <u>Secondary Benefits</u> | | | |
| Discount Rate: | 6.75% | Other Savings | \$0 | | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | | | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% | | |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% | | |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% | | |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% | | |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% | | |
| Electric Retail Rate (\$/KWh): | \$0.06 | | | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

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2020-2021 Commercial Services Program 2022-2024 Business Energy Services Program⁷¹

Description

NV Energy's Business Energy Services ("Program"), previously known as the Commercial Services Program, offers energy efficiency technical assistance and incentives to commercial and industrial customers, promoting investments in energy efficient retrofits, and new construction projects. The Program, offered to both Sierra and Nevada Power customers, generates long-term energy savings and peak demand reduction while influencing building owners, managers, architects, engineers, and contractors to realize the benefits of incorporating energy efficiencies into their businesses.

The retrofit component of the Program offers prescriptive rebates for energy efficient lighting, cooling, motors, commercial kitchens, refrigeration, and miscellaneous energy conservation measures. Additionally, custom rebates offer an opportunity for measures not covered under the prescriptive component, which resulted in verifiable energy savings.

The new construction component of the Program offers rebates for equipment, entire systems, and whole buildings. For projects to qualify for a rebate, they must exceed the IECC or applicable local building codes by at least five percent code the building it was permitted under.

The Program's Non-Profit Agency Grant component offers qualifying non-profit organizations financial means to implement energy-efficient measures. This component provides assistance in the form of rebates and technical support to non-profit organizations for identification and installation of energy-efficient measures in new or existing buildings. To qualify, an agency must be a 501(c)(3) entity within NV Energy's service territory.

The Program also offers incentives for small and medium business energy efficiency projects. This component of the Program provides incentives and project execution through trained contractors. Each Program component delivers technical support and financial incentives promoting installation of energy-efficient measures to customers, including lowering their utility expenses.

2020 Results

The expenditures and demand and energy savings results for the Program for the 2020 program year are provided in Table DSM-61 below.

⁷¹ Previously named the Commercial Services Program in NV Energy's Docket No. 18-06003, EX. 7.

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Table DSM-61: 2020 Business Energy Services Expenditures, Savings, and Unit Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Units | | |
|-------------------------------|---------------------|---------------------|----------------------------------|--------------------|--------------------|----------------------------------|---------------|---------------|----------------------------------|----------------|----------------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Business Energy Services | \$14,700,000 | \$11,777,030 | (19.9%) | 154,830,000 | 114,451,032 | (26.1%) | 20,934 | 25,110 | 19.9% | 152,600 | 114,451 | (25.0%) |
| Sierra | | | | | | | | | | | | |
| Business Energy Services | \$5,900,000 | \$5,205,813 | (11.8%) | 62,328,070 | 72,346,778 | 16.1% | 11,382 | 9,224 | (19.0%) | 62,500 | 72,347 | 15.8% |
| NV Energy | \$20,600,000 | \$16,982,843 | (17.6%) | 217,158,070 | 186,797,810 | (14.0%) | 32,316 | 34,334 | 6.2% | 215,100 | 186,798 | (13.2%) |

2020 Overall Results and Activities

At Nevada Power, the Program achieved 114,451,032 kWh in savings or 74 percent of its energy savings target while expending 80 percent of the approved budget. At Sierra, the Program achieved 72,346,778 kWh in savings or 116 percent of its energy savings while expending 88 percent of the approved budget. Program expenditures for Nevada Power were under budget, and, at Sierra, the Program was implemented at no additional cost to exceed goals.

Statewide, the 2020 Program achieved 186,797,810 kWh in savings or 86 percent of its energy savings target while expending 82 percent of the approved budget.

Prescriptive and custom lighting measures accounted for 68 percent of the 2020 annual kWh statewide, with the primary retrofit measure being LED lighting. The Program supported 801 commercial energy efficiency projects, including grants for 24 non-profit agencies.

The Program's Project Administrators along with Major Account Executives worked closely with managed-account customers to assure the Program is cost-effectively satisfying customer needs, while delivering savings through the completion of energy efficiency projects. Managed accounts represented 75 percent of Program savings.

Factors that contributed to the Program's performance were the strategy to incentivize tiers, which enabled more customers to participate, and limited incentives at 50 percent of total project costs. These Program rules lowered the cost per kWh while making incentive funds available to more customers.

Because the Program's design has rebate tiers distributing dollars more evenly across all customer segments, it allowed several large projects to achieve significant savings at a lower cost per kWh. In addition, the measure mix for projects achieved a higher verified savings in part because incremental pricing for more efficient measures continued to decline allowing for more savings at a lower cost. The demand savings are generally proportional to the energy savings.

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The Program's outreach strategy emphasized maintaining and strengthening key relationships with customers and trade allies to expand customer awareness and participation. Education and training events involved the use of various communication channels to promote customer awareness of the availability of services. The key message focused on how NV Energy continues to be a reliable resource for energy efficiency information and assistance through the incentive services and free training available. The Program implemented customer engagement strategies that captured customer participation and raised customer awareness of incentives and services. NV Energy's Major Account Executives and the NV Energy Contractor Network in conjunction with the Program team continued to be key channels for outreach and support for new and existing business customers.

The pandemic had a noteworthy impact on the Program's project administrator's ability to maintain communication with customers and network contractors. Due to the economic impact of the pandemic, many businesses closed temporarily, and a significant number of employees were displaced. The statewide mandates placed on businesses limited customer engagement and opportunities to capture new energy efficiency projects. Some businesses placed projects on hold until business returns to an acceptable level of normalcy. Other large businesses took advantage of the low foot traffic to accomplish energy efficiency projects. The Program used virtual meetings and emerging technology software to conduct remote energy assessments to aid customers to pursue or complete energy efficiency projects.

Outreach communication channels included the Program website, electronic quarterly newsletter, monthly electronic education and training announcement, virtual presentations to industry associations and local chambers of commerce, paid advertisement channels, external relationships built by the Program engineers, outreach staff, and administrators. The northern service territory is composed of a significant number of industrial customers, while the southern service territory is primarily composed of commercial and entertainment industries. A targeted digital campaign was effective in augmenting the team's efforts to promote the Program's benefits.

The contractor network was the primary platform used to accelerate customer participation. Trained contractors recruited participants, helped speed the application process, improved Program efficiency, while enhancing the customer's experience. The contractor network completed a total of 56 percent of the projects submitted. The Program offered contractor sales training and limited-time sales performance incentives that produced results in the southern service territory.

Networking opportunities at industry events were limited due to the pandemic but played a role in developing contacts and identifying decision-makers. Collaboration with the following organizations helped raise energy efficiency awareness and incentive opportunities:

- American Institute of Architects,
- American Society of Heating, Refrigerating and Air-Conditioning Engineers,
- American Society of Mechanical Engineers,

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- Association of Energy Engineers – NV,
- Building Owners and Managers Association,
- Certified Commercial Investment Member,
- Commercial Alliance Las Vegas,
- Chambers of Commerce,
- International Facility Management Association,
- National Association of Industrial and Office Properties,
- Nevada Contractor’s Association,
- Nevada Professional Facility Managers Association,
- Nevada Restaurant Association,
- Nevada Subcontractors Association,
- Society of Illuminating Engineers,
- Society of Industrial and Office Realtors, and
- US Green Building Council.

The Program provided education and assistance through participation in events and expositions. In March 2020, the team pivoted to virtual education and training events.

The NV Energy team educated more than 700 business customers through monthly lunch-and-learn seminars on non-profit agency grants, small business program, LED lighting, heating, refrigeration, ventilation and cooling, compressed air, life-cycle cost analysis, variable frequency drives, motors, pumps, net-zero energy, retro-commissioning, strategic energy management, and power optimization.

During 2020, the Program implemented several improvements as follows:

- Enhanced reporting and participation with Major Account Executives to reach managed customers and foster energy efficiency projects contributed to the overall Program success.
- The Program expanded the contractor network to help customers complete the application process.
- Performed free onsite customer energy assessments to identify potential energy saving project opportunities. Due to COVID-19, remote assessments were also offered to continue to support customers.
- Provided spiffs to the contractor network to increase customer participation.
- Offered limited time offers to customers to increase Program participation

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- Successfully launched a new midstream distributor incentive delivery process.
- The online platforms leveraged for Nevada Contractors Association, Nevada Professional Facility Managers Association, and Nevada Restaurant Association continued to play a key role in program awareness and participation.

2020 Lessons Learned and Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years:

- Using software designed to identify potential construction projects was effective in the identification of new opportunities. The software provides customer contacts and detailed project information, allowing for early detection of retrofit and new construction projects. This opened new pathways to connect with local contractors and customers to promote energy efficiency in the early stages of project development.
- Once a facility energy assessment was completed, the Program team initiated a follow-up meeting to encourage customers to complete energy efficiency recommendations. These conversations and reviews assisted in capturing new projects.
- Digital marketing campaign tracking was improved for 2020 giving additional insights in how to better structure digital ad campaigns to improve lead capture and tracking. This data was used to create a more robust ad and lead capture strategy to encourage ad audiences to complete energy efficiency projects.
- The Program leveraged resources and activities with other internal departments, which further assisted in promoting the Program and provided additional benefits to large customers.
- Thresholds for projects requiring a checklist will be reviewed early in 2021 to ensure they are still reasonable for the anticipated project mix in future program years.
- All available preliminary project documentation will be provided in addition to the preliminary project application and pre-construction checklist document as part of the measurement and verification process. This preliminary data will be used only to better inform decisions regarding measurement and verification activities and would not use this preliminary data for ex-post analysis.
- Deemed savings algorithms for select projects using historical program specific data will continue to be used when necessary.

2021 Plan

The authorized budgets, projected demand and energy savings targets, and participant goals for the Program for the 2021 program year are provided in Table DSM-62 below.

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Table DSM-62: 2021 Business Energy Services Authorized Budgets, Savings Targets, and Unit Goals

| 2021 Program Components | Authorized Budget Goal | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Units Goal |
|--------------------------------|-------------------------------|--|---|-------------------|
| Nevada Power | | | | |
| Business Energy Services | \$14,000,000 | 22,888 | 154,235,000 | 154,235 |
| Sierra | | | | |
| Business Energy Services | \$5,800,000 | 6,716 | 60,529,000 | 60,529 |
| NV Energy | \$19,800,000 | 29,604 | 214,764,000 | 214,764 |

The 2021 Business Energy Services program is operating in a similar manner as it did in 2020. The Program will continue to use its established contractor network for project recruitment and leverage NV Energy's Major Account Executives' existing contact and customer relationships. The Program continues to provide incentives for retrofit, new construction, small business, non-profits, and retro-commissioning projects. In addition, the Program provides education and training, technical assistance, and application assistance.

2021 Plan Changes

For Program year 2021, the following are plan changes that have been implemented or will be implemented:

- The program will experiment with software designed to identify potential projects, high value trade partners, and customer decision makers. The software provides customer contacts and detailed project information, allowing for early detection of retrofit and new construction projects. The Program will use this data to implement an enhanced outreach plan that will help to overcome challenges posed by the current pandemic. The real time project insights will play a key role in promoting energy efficiency to customers, contractors, and other trades involved in ongoing local projects. This strategy will also allow the Program to dive deeper into the market health and construction landscape segmented down by project type, territory, and zip code.
- During 2020, the Program launched a midstream-distributor incentive delivery process. The midstream delivery process enabled national and local distributors to offer program incentives at the point-of-sale. This delivery component will continue into 2021 as it reduced the amount of documentation required, which increased Program participation and savings. The midstream delivery process will test the concept with a limited number of prescriptive measures, access to the portal for distributors to document sales, and will continue to establish customer relationships. The Program has structured a distributor outreach plan that focuses on two specific aspects. First, growing participation from local distributors, then focusing efforts on promoting the instant discount program to local business to increase participation. The Program team will also create a hybrid promotion

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strategy between the contractor network participants and distributors to promote available products and discounts.

- Due to ongoing pandemic impacts, customer visits to conduct onsite energy assessments to identify energy efficiency opportunities will be limited. The Program will test an advanced remote energy assessment tool that will estimate energy savings and financial impacts of energy efficiency projects in real time. This predictive analytics and proven technology are based on thousands of energy performance improvement projects conducted nationwide over the past decade. The Program conducted a preliminary test in 2020 and found the remote energy assessment tool results to be within an acceptable variance in comparison to onsite energy assessments.
- In order to increase value for trade ally participation, a contractor network development plan will be executed in 2021 and includes expanding the benefits of contractors to include incorporating EVOLVE Partner Plus which is an automated, self-service tool that streamlines and automates trade ally applications and empowers trade allies to incorporate their energy programs into their business models. Developed with direct feedback from trade allies, EVOLVE Partner Plus will provide the Program the ability to quickly scale and enable the trade ally ecosystem. EVOLVE Partner Plus provides trade allies with the self-service tools, training, and marketing materials needed to maximize their affiliation with the Program and facilitates deeper engagement with program staff through online chat, email, and telephone support.
- The digital data analytics reviewed in 2020 presented some growth opportunity to bridge the gap between brand promotion and project participation. For 2021, implementation of a 3rd party-hosted lead-capture landing page structure is being implemented. This allows the Program to tie marketing message directly to lead capture pages to inform and persuade them to take action towards program participation. This will add significant value to several marketing areas. The most notable is in the ability to tie digital ad efforts directly to leads and participation outcomes. Additionally, this strategy will improve the overall user experience from clicked to action. Lastly, this strategy will provide direct leads from digital ads and the data gathered will be used to continue to evolve the digital marketing strategy.
- A content download strategy will also be implemented and will work tandem with the lead page structure.
- For 2021, additional messaging strategies will be explored focusing on 3 key messaging areas: brand messaging, technology messaging, and project messaging. The goal is to discover the messaging strategy that most resonates with consumers interest in energy efficiency to identify whether the language that drives action is tied to the brand, specific technologies such as lighting or HVAC, or if project terms like facility improvements or major renovations drives more action.
- Social media is also presenting several opportunities to connect with businesses. For 2021, there will be an initial LinkedIn engagement strategy implemented and the initial phases of testing paid messaging strategies on social platforms to be expanded in future program years.

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- For 2021, there will be an enhancement to the overall association and community partnership plan. Expanding marketing opportunities into areas where there is a direct connection link to business decision makers and appropriate trades. The Program will be reviewing a “Let’s Talk about Energy Savings” marketing plan structure focused on developing our partnered trade associations.
- Starting in 2021, a content development strategy will be structured to bridge on the “Let’s Talk about Energy Savings” campaign. This plan focuses on creating key informational action driven advertorials to be placed in key media sources, specifically the Las Vegas review journal. This allows the Program to continue the conversation on energy efficiency in a structured way that adds value and credibility to the community. This effort will be expanded throughout the year.
- A non-participant engagement plan will be implemented in 2021 which focuses on expanding key areas of outreach to promote energy efficiency to non-participants. The Program plans to launch the Evolve Intelligence analytics platform to dive insights into customer segments and industries to identify opportunities to promote energy efficiency. This targeted approach will reduce the cost of resources needed to drive market adoption of emerging energy efficiency technology.

2022-2024 Proposed Plans

The proposed budget, projected demand and energy savings, and participant goals for the Program for the 2022 through 2024 program years are provided in Table DSM-63 below.

Table DSM-63: 2022-2024 Business Energy Services Proposed Budgets, Savings Targets, and Unit Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Units Goal |
|--------------------------|---------------------|-----------------------------------|------------------------------------|----------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Business Energy Services | \$14,000,000 | 14,070 | 148,000,000 | 148,000 |
| Sierra | | | | |
| Business Energy Services | \$5,700,000 | 5,984 | 71,300,000 | 71,300 |
| NV Energy | \$19,700,000 | 20,054 | 219,300,000 | 219,300 |
| 2023 | | | | |
| Nevada Power | | | | |
| Business Energy Services | \$14,000,000 | 14,070 | 148,000,000 | 148,000 |
| Sierra | | | | |
| Business Energy Services | \$5,700,000 | 5,984 | 71,300,000 | 71,300 |
| NV Energy | \$19,700,000 | 20,054 | 219,300,000 | 219,300 |
| 2024 | | | | |
| Nevada Power | | | | |
| Business Energy Services | \$14,000,000 | 14,070 | 148,000,000 | 148,000 |
| Sierra | | | | |
| Business Energy Services | \$5,700,000 | 5,984 | 71,300,000 | 71,300 |
| NV Energy | \$19,700,000 | 20,054 | 219,300,000 | 219,300 |

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NV Energy's Business Energy Services Program reduces utility costs, stimulates economic development and growth of new industries coming to Nevada, improves the comfort level in buildings, and reduces facility operating costs with the replacement of older systems by easing the costs of newer and more efficient facility operation upgrades.

The Program will provide expert technical assistance and incentives to commercial and industrial customers to encourage investments in energy efficient retrofits and new construction projects. The Program will be available to both Sierra and Nevada Power customers and will be delivered via six components: (1) the retrofit project incentive component which offers prescriptive and custom rebates for energy conservation measures; (2) the new construction component which provides rebates for equipment, entire systems, and whole buildings; (3) the Non-Profit Agency Grant offering non-profit organizations financial means to implement energy efficiency measures; (4) the small and medium business project incentive component which provides incentives through trained contractors for energy efficiency projects; (5) the instant discount component provides instant incentives at point of purchase for select measures through contractor distribution channels; and (6) free education and training is provided as part of the program in the form of virtual and in-person offerings on both Program specifics as well as on specific measure type information.

Retrofit Project Incentives - The retrofit component of the Program offers per-unit prescriptive incentives for energy efficient lighting, cooling, motors, commercial kitchens, refrigeration, and miscellaneous energy conservation measures. Additionally, the Program offers custom incentives for most measures not covered under the prescriptive component that result in verifiable energy savings.

New Construction Project Incentives - The new construction component of the Program offers incentives for single equipment items, entire systems, and entire buildings. For projects to qualify for an incentive, projects must exceed the applicable IECC the facility was permitted under by at least five of the 2012 IECC or 5 percent of the 2018 IECC.

Non-Profit Agency Grants - The Program offers grants to non-profit 501(c)3 organizations. Each project must pass NV Energy's TRC evaluation to be awarded a grant. Typically, projects that generate energy savings with a cost per kWh of \$0.20 or less will qualify for a grant. Customers can receive 100 percent of the project cost up to the first \$5,000. NV Energy will match the project costs by 50 percent that exceed \$5,000 up to \$10,000. The total possible incentive amount cannot exceed \$7,500.

Small Business Project Incentives - The Program offers a small business component to help small and medium businesses lower their electric consumption and reduce operating costs by installing energy efficient equipment or products. NV Energy business customers who have an annual electric consumption of 400,000 kWh or less are eligible to participate in the small business component. Customers can visit the Program website to select a vendor from our small business contractor network. These contractors have been vetted by the Program to provide customers with a free energy assessment. The free energy assessment will identify energy efficiency measures that align with the Program incentives and include a cost proposal for implementation.

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Instant Discount - The Program instant discount component is designed to encourage commercial businesses to purchase energy efficient products over less efficient ones. By discounting the price of approved products at the point of sale, the energy efficient product prices will be comparable to conventional products. This unique offering requires no application paperwork for the customer or contractor. The end user receives their discount immediately and does not have to wait to complete the project to receive an incentive. Participation in the component increases their adoption of designed technology to support market transformation.

Free Education and Training - The Program also provides free education and training for which the primary goal is to help business customers reduce their energy consumption and lower their operating cost by educating them on the value of energy efficiency. The Program provides free training in the following subjects: Lighting, HVAC, Compressed Air, Strategic Energy Management, Variable Frequency Drives, Motors, Pumps, and Online Application training.

2022-2024 Proposed Plan Enhancements

The following are the Program plan enhancements that have been implemented or will be implemented during the 2022 through 2024 program years:

- The essential elements of the Program will remain similar to previous year's based on past performance and continued success. If the results of the new midstream delivery model are successful in program year 2021, more measures may be considered for inclusion into this delivery model in 2022.
- The use of a remote energy assessment tool will be expanded to target more small and medium business customers to increase customer participation. The Program will further develop the tool to enable remote energy assessments to be conducted on more complex facilities to capture heating ventilation and air-conditioning impacts. The successful modification of the tool will allow for a wider array of business types to benefit from the remote energy assessment component. The tool provides a pathway to deeper discussions with customers to adopt the implementation of energy efficiency equipment to garner energy savings.
- Using data compiled in 2021 for the content download strategy, the Program will look at growing downloads for other subprograms and lead page strategies for 2022 through 2024.
- Using data compiled in 2021 for the social media strategy, the Program will continue to expand on digital opportunities for organic and paid social media ads to connect with key decision makers and trade partners.
- Starting in 2022, the Program will continue expanding on the marketing strategy by evaluating the data capture via landing pages and tracked ad structures to expand on lead capture potential from digital sources.

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- For 2022 through 2024, the Program will continue to expand on the non-participant engagement strategy developing a long-term growth plan that will build year over year to capture non-participants through 2024.
- The Program will use the partially deemed savings algorithms that were identified in the core Program and implemented in the Small Business Direct Install Program. These will be evaluated in 2021 with the targeted change being implemented beginning in 2022.
- Enhanced involvement with Major Accounts managed accounts.

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-13 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-13 and DSM-17, which are calculated by the third-party evaluator ADM.

Incremental Costs

There are four measure types for the Program's incremental costs (1) New construction, (2) Replacement-on burnout (failure, natural, burnout or diminishing functionality), (3) Early replacement; and (4) Controls.

The base cost is not the same for the four measure types. For new construction and replacement on burnout, the base cost is the cost of the code or standard compliant measure and the incremental cost is the efficient measure cost minus the cost of the baseline measure. In the case of early replacement or controls, the base cost is zero; therefore, the incremental cost is the full cost of the energy efficient measure. Lighting upgrades are considered early replacement with most projects replacing functional but inefficient lighting. Occupancy sensors or light sensors are included under controls and the incremental cost is the full cost for the control measures. The AC replacements are considered replacement on burnout, with the incremental costs calculated based on the difference between the energy efficient measure and the baseline measure cost.

The incremental cost for this Program is based on a derived unit due to the dozens of measures supported, the 2020 incremental cost, and the weighted average of all the measures completed in 2020. The average incremental cost is \$182.08 at Nevada Power and \$163.57 at Sierra.

Incentives/Rebates

This Program uses both rebates and incentives to support energy efficiency projects. Primarily, the Program uses rebates to pay customers directly offsetting costs to purchase and install the measure. The Direct Install program component is targeted to small and medium businesses, and incentives

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are paid directly to contractors. The rebates and incentives are paid after the Program team has verified measures have been installed.

The Program also employs both prescriptive and custom rebates. Rebates are paid on per kWh saved. The prescriptive rebates apply to projects with predictable energy savings, which are based on actual kWh savings. Custom rebates are used with projects that require engineering calculations to determine actual energy saved.

Program incentives are adjusted in response to market acceptance of available measures to meet energy saving and cost effectiveness goals.

Measure Life

As determined in the M&V Report, the EUL for this program is 12.1 years for Nevada Power and 13.3 years for Sierra.

Measure Units

The analysis of this Program has been performed using a derived unit because it includes a multitude of Energy-efficient measures. The unit of measure for a derived unit for this Program is based on 1,000 kWh per unit. The 1,000 kWh unit is derived from measures with different unit sizes (e.g. square foot of window film, number of fixtures installed, and watts reduced). Such differences make comparisons and energy efficiency computations by units installed extremely difficult and the entry of all measures in the financial modeling impractical.

Savings

The unit savings for the Program are based on a derived unit of 1,000 kWh.

Financial Analysis

Financial assumptions are provided in Section 4 of the DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Program has an overall cost effectiveness NTRC score for 2020 of 1.85 for Nevada Power and 2.22 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 1.81 for 2022, 1.87 for 2023, and 1.95 for 2024 for Nevada Power and for Sierra 2.09 for 2022, 2.17 for 2023, and 2.25 for 2024.

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Business Energy Services Program Data Sheet

Nevada Power Input and Output Sheets

Nevada Power - Commercial Services

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Incremental Measure Cost per Unit | Total Incremental Measure Cost | Net-to-Gross |
|---------------------|---------------------------|---------------------|----------------------|-------------|-----------------|------------------|-----------------------------|-----------------------------------|-----------------------|-----------------------------------|--------------------------------|--------------|
| Measures | \$11,777,030 | \$1,287,969 | \$5,360,801 | \$5,128,260 | | | | | | | | |
| Commercial Measures | | | | | 114,451 | \$45 | 1,000 | 114,451,032 | 12.1 | \$182 | \$20,839,032 | 90.0% |
| Total | | | | | 114,451 | \$45 | 1,000 | 114,451,032 | 12.1 | \$182 | \$20,839,032 | 90.0% |

| | | | |
|-------------------------|-------------------------------|------------------------------|-----------------------------------|
| Name: | 2020 Business Energy Services | Last Updated: | 5/25/2021 19:56 |
| Customer Sector: | Commercial | Avg Measure Life: | 12.10 |
| Region : | Vegas | Energy Savings Curve: | Business Energy Services |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsx |
| End Year: | 2020 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|--------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$47,859,853 | \$25,916,944 | \$21,942,909 | 1.85 | \$0.028 |
| Total Resource Cost (TRC) | \$43,508,957 | \$25,916,944 | \$17,592,013 | 1.68 | \$0.028 |
| Utility Cost Test (UCT) | \$43,508,957 | \$11,777,320 | \$31,731,637 | 3.69 | \$0.013 |
| Participant Cost Test (PCT) | \$73,149,773 | \$20,839,244 | \$52,310,529 | 3.51 | \$0.020 |
| Ratepayer Impact (RIM) | \$43,508,957 | \$72,996,420 | (\$29,487,463) | 0.60 | \$0.079 |
| Societal Cost (SCT) | \$50,540,460 | \$25,916,944 | \$24,623,516 | 1.95 | \$0.028 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|--------------|------|------|---------------|
| Total Utility Investment (\$) | \$11,777,320 | \$0 | \$0 | \$11,777,320 |
| Electric Benefits (\$) | \$4,048,154 | \$0 | \$0 | \$4,048,154 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 108,169,963 | 0 | 0 | 1,308,856,550 |
| Critical Peak Hour Demand (kW) | 15,066 | 0 | 0 | 15,066 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 9,662,658 | 0 | 0 | 116,735,864 |
| Total On Peak Hours (%) | | | | 8.92% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 90.0% | | |

| | | | |
|-------------------------|---------------------|------------------------------|-----------------|
| Name: | Commercial Services | Last Updated: | 5/24/2021 |
| Customer Sector: | Commercial | Avg Measure Life: | 12.10 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:53 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| | | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|--------------|-------------------|-------------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$47,859,862 | \$25,916,725 | \$21,943,138 | 1.85 | \$0.022 |
| Total Resource Cost (TRC) | \$43,508,966 | \$25,916,725 | \$17,592,241 | 1.68 | \$0.022 |
| Utility Cost Test (UCT) | \$43,508,966 | \$11,777,030 | \$31,731,936 | 3.69 | \$0.010 |
| Participant Cost Test (PCT) | \$73,149,482 | \$20,839,032 | \$52,310,450 | 3.51 | \$0.018 |
| Rate Payer Impact (RIM) | \$43,508,966 | \$72,996,129 | (\$29,487,164) | 0.60 | \$0.062 |
| Societal Cost (SCT) | \$50,808,530 | \$25,916,725 | \$24,891,806 | 1.96 | \$0.022 |

*Includes Rebates Paid to Freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|--------------|------|------|---------------|
| Total Utility Investment (\$) | \$11,777,030 | \$0 | \$0 | \$11,777,030 |
| Electric Benefit (\$) | \$4,048,149 | \$0 | \$0 | \$4,048,149 |
| Gas Benefit (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 108,169,963 | 0 | 0 | 1,308,856,550 |
| Critical Peak Hour Demand (kW) | 15,066 | 0 | 0 | 15,066 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 9,647,592 | 0 | 0 | 116,735,864 |
| Total on Peak Hours (%) | | | | 8.92% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-to-Gross Ratio | 90.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Business Energy Services Program Data Sheet

Nevada Power - Business Energy Services

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Incremental Measure Cost per Unit | Total Incremental Measure Cost | Net-to- Gross |
|---------------------|------------------------------------|------------------------|-------------------------|------------|-------------|-----------------------|---------------------|--------------------------------------|---|-----------------------------|---|---|------------------|
| Measures | \$14,000,000 | \$1,570,271 | \$5,631,472 | \$0 | \$6,798,256 | | | | | | | | |
| Commercial Measures | | | | | \$6,798,256 | 148,000 | \$46 | 1,000 | 148,000,000 | 12.1 | \$182 | \$26,947,566 | 65.0% |
| Total | | | | | \$6,798,256 | 148,000 | \$46 | 1,000 | 148,000,000 | 12.1 | \$182 | \$26,947,566 | 65.0% |

Nevada Power - Business Energy Services

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Incremental Measure Cost per Unit | Total Incremental Measure Cost | Net-to- Gross |
|---------------------|------------------------------------|------------------------|-------------------------|------------|-------------|-----------------------|---------------------|--------------------------------------|---|-----------------------------|---|---|------------------|
| Measures | \$14,000,000 | \$1,570,271 | \$5,631,472 | \$0 | \$6,798,256 | | | | | | | | |
| Commercial Measures | | | | | \$6,798,256 | 148,000 | \$46 | 1,000 | 148,000,000 | 12.1 | \$182 | \$26,947,566 | 65.0% |
| Total | | | | | \$6,798,256 | 148,000 | \$46 | 1,000 | 148,000,000 | 12.1 | \$182 | \$26,947,566 | 65.0% |

Nevada Power - Business Energy Services

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Incremental Measure Cost per Unit | Total Incremental Measure Cost | Net-to- Gross |
|---------------------|------------------------------------|------------------------|-------------------------|------------|-------------|-----------------------|---------------------|--------------------------------------|---|-----------------------------|---|---|------------------|
| Measures | \$14,000,000 | \$1,570,271 | \$5,631,472 | \$0 | \$6,798,256 | | | | | | | | |
| Commercial Measures | | | | | \$6,798,256 | 148,000 | \$46 | 1,000 | 148,000,000 | 12.1 | \$182 | \$26,947,566 | 65.0% |
| Total | | | | | \$6,798,256 | 148,000 | \$46 | 1,000 | 148,000,000 | 12.1 | \$182 | \$26,947,566 | 65.0% |

| | | | |
|-------------------------|-------------------------------|------------------------------|-----------------------------------|
| Name: | 2022 Business Energy Services | Last Updated: | 5/25/2021 20:07 |
| Customer Sector: | Commercial | Avg Measure Life: | 12.10 |
| Region : | Vegas | Energy Savings Curve: | Business Energy Services |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$49,004,478 | \$27,097,014 | \$21,907,464 | 1.81 | \$0.032 |
| Total Resource Cost (TRC) | \$44,549,525 | \$27,097,014 | \$17,452,512 | 1.64 | \$0.032 |
| Utility Cost Test (UCT) | \$44,549,525 | \$13,999,384 | \$30,550,142 | 3.18 | \$0.016 |
| Participant Cost Test (PCT) | \$94,757,885 | \$26,947,840 | \$67,810,045 | 3.52 | \$0.020 |
| Ratepayer Impact (RIM) | \$44,549,525 | \$71,173,543 | (\$26,624,018) | 0.63 | \$0.083 |
| Societal Cost (SCT) | \$51,808,517 | \$27,097,014 | \$24,711,503 | 1.91 | \$0.032 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--------------------------------------|--------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$13,999,384 | \$0 | \$0 | \$13,999,384 |
| Electric Benefits (\$) | \$4,335,811 | \$0 | \$0 | \$4,335,811 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 101,022,830 | 0 | 0 | 1,222,376,242 |
| Critical Peak Hour Demand (kW) | 14,070 | 0 | 0 | 14,070 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 9,024,215 | 0 | 0 | 109,022,754 |
| Total On Peak Hours (%) | | | | 8.92% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 65.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Business Energy Services Program Data Sheet

| | | | |
|-------------------------|-------------------------------|------------------------------|-----------------------------------|
| Name: | 2023 Business Energy Services | Last Updated: | 5/25/2021 20:15 |
| Customer Sector: | Commercial | Avg Measure Life: | 12.10 |
| Region : | Vegas | Energy Savings Curve: | Business Energy Services |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$50,788,941 | \$27,097,014 | \$23,691,927 | 1.87 | \$0.032 |
| Total Resource Cost (TRC) | \$46,171,764 | \$27,097,014 | \$19,074,751 | 1.70 | \$0.032 |
| Utility Cost Test (UCT) | \$46,171,764 | \$13,999,384 | \$32,172,381 | 3.30 | \$0.016 |
| Participant Cost Test (PCT) | \$94,757,885 | \$26,947,840 | \$67,810,045 | 3.52 | \$0.020 |
| Ratepayer Impact (RIM) | \$46,171,764 | \$71,173,543 | (\$25,001,779) | 0.65 | \$0.083 |
| Societal Cost (SCT) | \$53,705,209 | \$27,097,014 | \$26,608,196 | 1.98 | \$0.032 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--------------------------------------|--------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$13,999,384 | \$0 | \$0 | \$13,999,384 |
| Electric Benefits (\$) | \$4,307,128 | \$0 | \$0 | \$46,171,764 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 101,022,830 | 0 | 0 | 1,222,376,242 |
| Critical Peak Hour Demand (kW) | 14,070 | 0 | 0 | 14,070 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 9,024,215 | 0 | 0 | 109,022,754 |
| Total On Peak Hours (%) | | | | 8.92% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 65.0% | | |

| | | | |
|-------------------------|-------------------------------|------------------------------|-----------------------------------|
| Name: | 2024 Business Energy Services | Last Updated: | 5/25/2021 20:23 |
| Customer Sector: | Commercial | Avg Measure Life: | 12.10 |
| Region : | Vegas | Energy Savings Curve: | Business Energy Services |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$52,824,189 | \$27,097,014 | \$25,727,175 | 1.95 | \$0.032 |
| Total Resource Cost (TRC) | \$48,021,990 | \$27,097,014 | \$20,924,976 | 1.77 | \$0.032 |
| Utility Cost Test (UCT) | \$48,021,990 | \$13,999,384 | \$34,022,606 | 3.43 | \$0.016 |
| Participant Cost Test (PCT) | \$94,757,885 | \$26,947,840 | \$67,810,045 | 3.52 | \$0.020 |
| Ratepayer Impact (RIM) | \$48,021,990 | \$71,173,543 | (\$23,151,553) | 0.67 | \$0.083 |
| Societal Cost (SCT) | \$55,870,414 | \$27,097,014 | \$28,773,400 | 2.06 | \$0.032 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|--------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$13,999,384 | \$0 | \$0 | \$13,999,384 |
| Electric Benefits (\$) | \$4,045,884 | \$0 | \$0 | \$48,021,990 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 101,022,830 | 0 | 0 | 1,222,376,242 |
| Critical Peak Hour Demand (kW) | 14,070 | 0 | 0 | 14,070 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 9,024,215 | 0 | 0 | 109,022,754 |
| Total On Peak Hours (%) | | | | 8.92% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 65.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Business Energy Services Program Data Sheet

Sierra Input and Output Sheets

Sierra - Commercial Services

| 2020 | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Incremental Measure Cost per Unit | Total Incremental Measure Cost | Net-to-Gross |
|---------------------|---------------------------|---------------------|----------------------|-------------|-----------------|------------------|-----------------------------|-----------------------------------|-----------------------|-----------------------------------|--------------------------------|--------------|
| Measures | \$5,205,813 | \$499,435 | \$2,303,755 | \$2,402,623 | | | | | | | | |
| Commercial Measures | | | | | 72,347 | \$33 | 1,000 | 72,346,778 | 13.3 | \$164 | \$11,834,124 | 74.0% |
| Total | | | | | 72,347 | \$33 | 1,000 | 72,346,778 | 13.3 | \$164 | \$11,834,124 | 74.0% |

| | | | |
|-------------------------|-------------------------------|------------------------------|----------------------------------|
| Name: | 2020 Business Energy Services | Last Updated: | 5/25/2021 19:00 |
| Customer Sector: | Commercial | Avg Measure Life: | 13.30 |
| Region : | Reno | Energy Savings Curve: | Business Energy Services |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2020 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|--------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$27,086,505 | \$12,185,395 | \$14,901,110 | 2.22 | \$0.023 |
| Total Resource Cost (TRC) | \$24,624,096 | \$12,185,395 | \$12,438,701 | 2.02 | \$0.023 |
| Utility Cost Test (UCT) | \$24,624,096 | \$5,205,826 | \$19,418,269 | 4.73 | \$0.010 |
| Participant Cost Test (PCT) | \$42,242,268 | \$11,834,486 | \$30,407,782 | 3.57 | \$0.017 |
| Ratepayer Impact (RIM) | \$24,624,096 | \$34,687,153 | (\$10,063,058) | 0.71 | \$0.066 |
| Societal Cost (SCT) | \$28,629,761 | \$12,185,395 | \$16,444,366 | 2.35 | \$0.023 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|------|------|---------------|
| Total Utility Investment (\$) | \$5,205,826 | \$0 | \$0 | \$5,205,826 |
| Electric Benefits (\$) | \$2,097,834 | \$0 | \$0 | \$2,097,834 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 57,136,196 | 0 | 0 | 57,136,196 |
| Critical Peak Hour Demand (kW) | 7,883 | 0 | 0 | 7,883 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 2,294,895 | 0 | 0 | 2,294,895 |
| Total On Peak Hours (%) | | | | 17.21% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-To-Gross Ratio | 74.0% | | |

| | | | |
|-------------------------|---------------------|------------------------------|-----------------|
| Name: | Commercial Services | Last Updated: | 5/24/2021 |
| Customer Sector: | Commercial | Avg Measure Life: | 13.30 |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:04 |
| Start Year: | 2020 | | |
| End Year: | 2020 | | |
| Notes: | | ACE guru™ Model | |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|--------------|-------------------|-------------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$27,086,506 | \$12,185,124 | \$14,901,382 | 2.22 | \$0.016 |
| Total Resource Cost (TRC) | \$24,624,096 | \$12,185,124 | \$12,438,972 | 2.02 | \$0.016 |
| Utility Cost Test (UCT) | \$24,624,096 | \$5,205,813 | \$19,418,283 | 4.73 | \$0.007 |
| Participant Cost Test (PCT) | \$42,242,254 | \$11,834,124 | \$30,408,130 | 3.57 | \$0.016 |
| Rate Payer Impact (RIM) | \$24,624,096 | \$34,687,140 | (\$10,063,044) | 0.71 | \$0.046 |
| Societal Cost (SCT) | \$28,629,761 | \$12,185,124 | \$16,444,638 | 2.35 | \$0.016 |

*Includes Rebates Paid to Freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-------------|------|------|---------------|
| Total Utility Investment (\$) | \$5,205,813 | \$0 | \$0 | \$5,205,813 |
| Electric Benefit (\$) | \$2,097,834 | \$0 | \$0 | \$2,097,834 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 57,136,196 | 0 | 0 | 57,136,196 |
| Critical Peak Hour Demand (kW) | 7,883 | 0 | 0 | 7,883 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 2,287,012 | 0 | 0 | 2,287,012 |
| Total on Peak Hours (%) | | | | 4.00% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate | 6.75% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | |
| Line Loss (Energy) | 6.30% | Measure Life | 100% |
| Line Loss (Demand) | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-to-Gross Ratio | 74.00% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Business Energy Services Program Data Sheet

Sierra - Business Energy Services

| 2022 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Incremental Measure Cost per Unit | Total Incremental Measure Cost | Net-to- Gross |
|---------------------|------------------------------------|------------------------|-------------------------|------------|-------------|-----------------------|---------------------|--------------------------------------|---|-----------------------------|---|---|------------------|
| Measures | \$5,700,000 | \$653,916 | \$2,152,106 | \$0 | \$2,893,978 | | | | | | | | |
| Commercial Measures | | | | | \$2,893,978 | 71,300 | \$41 | 1,000 | 71,300,000 | 13.3 | \$164 | \$11,662,897 | 57.0% |
| Total | | | | | \$2,893,978 | 71,300 | \$41 | 1,000 | 71,300,000 | 13.3 | \$164 | \$11,662,897 | 57.0% |

Sierra - Business Energy Services

| 2023 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Incremental Measure Cost per Unit | Total Incremental Measure Cost | Net-to- Gross |
|---------------------|------------------------------------|------------------------|-------------------------|------------|-------------|-----------------------|---------------------|--------------------------------------|---|-----------------------------|---|---|------------------|
| Measures | \$5,700,000 | \$653,916 | \$2,152,106 | \$0 | \$2,893,978 | | | | | | | | |
| Commercial Measures | | | | | \$2,893,978 | 71,300 | \$41 | 1,000 | 71,300,000 | 13.3 | \$164 | \$11,662,897 | 57.0% |
| Total | | | | | \$2,893,978 | 71,300 | \$41 | 1,000 | 71,300,000 | 13.3 | \$164 | \$11,662,897 | 57.0% |

Sierra - Business Energy Services

| 2024 | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Number of Units | Rebates per unit | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Incremental Measure Cost per Unit | Total Incremental Measure Cost | Net-to- Gross |
|---------------------|------------------------------------|------------------------|-------------------------|------------|-------------|-----------------------|---------------------|--------------------------------------|---|-----------------------------|---|---|------------------|
| Measures | \$5,700,000 | \$653,916 | \$2,152,106 | \$0 | \$2,893,978 | | | | | | | | |
| Commercial Measures | | | | | \$2,893,978 | 71,300 | \$41 | 1,000 | 71,300,000 | 13.3 | \$164 | \$11,662,897 | 57.0% |
| Total | | | | | \$2,893,978 | 71,300 | \$41 | 1,000 | 71,300,000 | 13.3 | \$164 | \$11,662,897 | 57.0% |

| | | | |
|-------------------------|-------------------------------|------------------------------|----------------------------------|
| Name: | 2022 Business Energy Services | Last Updated: | 5/25/2021 19:12 |
| Customer Sector: | Commercial | Avg Measure Life: | 13.30 |
| Region : | Reno | Energy Savings Curve: | Business Energy Services |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2022 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$22,400,499 | \$10,698,526 | \$11,701,973 | 2.09 | \$0.027 |
| Total Resource Cost (TRC) | \$20,364,090 | \$10,698,526 | \$9,665,564 | 1.90 | \$0.027 |
| Utility Cost Test (UCT) | \$20,364,090 | \$5,700,089 | \$14,664,001 | 3.57 | \$0.014 |
| Participant Cost Test (PCT) | \$42,157,263 | \$11,663,254 | \$30,494,009 | 3.61 | \$0.017 |
| Ratepayer Impact (RIM) | \$20,364,090 | \$28,080,111 | (\$7,716,021) | 0.73 | \$0.071 |
| Societal Cost (SCT) | \$23,697,980 | \$10,698,526 | \$12,999,454 | 2.22 | \$0.027 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$5,700,089 | \$0 | \$0 | \$5,700,089 |
| Electric Benefits (\$) | \$1,807,704 | \$0 | \$0 | \$20,364,090 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 43,373,533 | 0 | 0 | 576,867,983 |
| Critical Peak Hour Demand (kW) | 5,984 | 0 | 0 | 5,984 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,742,113 | 0 | 0 | 99,265,983 |
| Total On Peak Hours (%) | | | | 17.21% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-To-Gross Ratio | 57.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Business Energy Services Program Data Sheet

| | | | |
|-------------------------|-------------------------------|------------------------------|----------------------------------|
| Name: | 2023 Business Energy Services | Last Updated: | 5/25/2021 19:19 |
| Customer Sector: | Commercial | Avg Measure Life: | 13.30 |
| Region : | Reno | Energy Savings Curve: | Business Energy Services |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2023 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$23,181,176 | \$10,698,526 | \$12,482,650 | 2.17 | \$0.027 |
| Total Resource Cost (TRC) | \$21,073,796 | \$10,698,526 | \$10,375,271 | 1.97 | \$0.027 |
| Utility Cost Test (UCT) | \$21,073,796 | \$5,700,089 | \$15,373,707 | 3.70 | \$0.014 |
| Participant Cost Test (PCT) | \$42,157,263 | \$11,663,254 | \$30,494,009 | 3.61 | \$0.017 |
| Ratepayer Impact (RIM) | \$21,073,796 | \$28,080,111 | (\$7,006,314) | 0.75 | \$0.071 |
| Societal Cost (SCT) | \$24,526,682 | \$10,698,526 | \$13,828,156 | 2.29 | \$0.027 |

**Includes rebates paid to freeriders*

| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$5,700,089 | \$0 | \$0 | \$5,700,089 |
| Electric Benefits (\$) | \$1,788,905 | \$0 | \$0 | \$21,073,796 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 43,373,533 | 0 | 0 | 576,867,983 |
| Critical Peak Hour Demand (kW) | 5,984 | 0 | 0 | 5,984 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,742,113 | 0 | 0 | 99,265,983 |
| Total On Peak Hours (%) | | | | 17.21% |

**Savings in this section are adjusted for line loss and net-to-gross*

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-To-Gross Ratio | 57.0% | | |

| | | | |
|-------------------------|-------------------------------|------------------------------|----------------------------------|
| Name: | 2024 Business Energy Services | Last Updated: | 5/25/2021 19:30 |
| Customer Sector: | Commercial | Avg Measure Life: | 13.30 |
| Region : | Reno | Energy Savings Curve: | Business Energy Services |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2024 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$24,042,868 | \$10,698,526 | \$13,344,343 | 2.25 | \$0.027 |
| Total Resource Cost (TRC) | \$21,857,153 | \$10,698,526 | \$11,158,627 | 2.04 | \$0.027 |
| Utility Cost Test (UCT) | \$21,857,153 | \$5,700,089 | \$16,157,064 | 3.83 | \$0.014 |
| Participant Cost Test (PCT) | \$42,157,263 | \$11,663,254 | \$30,494,009 | 3.61 | \$0.017 |
| Ratepayer Impact (RIM) | \$21,857,153 | \$28,080,111 | (\$6,222,958) | 0.78 | \$0.071 |
| Societal Cost (SCT) | \$25,441,640 | \$10,698,526 | \$14,743,114 | 2.38 | \$0.027 |

**Includes rebates paid to freeriders*

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$5,700,089 | \$0 | \$0 | \$5,700,089 |
| Electric Benefits (\$) | \$1,679,075 | \$0 | \$0 | \$21,857,153 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 43,373,533 | 0 | 0 | 576,867,983 |
| Critical Peak Hour Demand (kW) | 5,984 | 0 | 0 | 5,984 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,742,113 | 0 | 0 | 99,265,983 |
| Total On Peak Hours (%) | | | | 17.21% |

**Savings in this section are adjusted for line loss and net-to-gross*

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-To-Gross Ratio | 57.0% | | |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Commercial DR – Build and Manage Programs Data Sheet**

2020-2024 Commercial DR – Build and Manage Programs

Description

NV Energy's Commercial DR Program ("Program") focuses on DR and energy savings. The Build component of the Program recruits commercial customers into an on-going service. This component allows business customers to use DR smart technology, such as, Pelican network thermostats ("Pelican"), Encycle demand limiting devices ("Encycle"), Universal Devices, manual DR through emails, and customer-owned technologies with OpenADR 2.0 to interact with customers' AC and lighting end-use loads during peak or emergency conditions to reduce peak demands. The Manage component of the Program consists of customers that were recruited into the Build Program in previous years.

Community DR Event will send a signal to devices connected to NV Energy's DRMS to reduce and shift energy consumption outside of peak demand hours.

Customers that elect to participate in the Program are provided technology that saves energy and money on their utility bills at no charge. Customers also have the option to use their own existing technologies and receive billing credits based on their level of participation in Events. Customers with DR technologies that control their AC loads also have access to the application portal interface, which enables them to program their devices and view historical usage information.

The requirements to participate in the Program include:

- Customers must reside in NV Energy's service territory,
- Customers must have a functioning AC unit that meets the cooling load requirements,
- Customers must be able to increase their thermostat temperatures by four degrees during Events, and
- Customer must have always-on internet service.

2020 Results

The expenditures, demand and energy savings, and participant results for the Program for the 2020 program year are provided in Table DSM-64 below.

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Commercial DR – Build and Manage Programs Data Sheet

Table DSM-64: 2020 Commercial DR Expenditures, Savings, and Participants Results

| 2020 Program Components | Program Budget | | | kWh Savings | | | kW Savings | | | Participants | | |
|--|--------------------|--------------------|----------------------------------|------------------|-------------------|----------------------------------|---------------|---------------|----------------------------------|---------------|--------------|----------------------------------|
| | Authorized | Actual | Variance Over (Under) % | Target | Annual Savings | Variance Over (Under) % | Target | Achieved | Variance Over (Under) % | Goal | Achieved | Variance Over (Under) % |
| Nevada Power | | | | | | | | | | | | |
| Commercial Demand Response - Manage | \$650,000 | \$320,979 | (50.6%) | 6,000,000 | 5,285,258 | (11.9%) | 19,065 | 14,074 | (26.2%) | 9,000 | 1,753 | (80.5%) |
| Commercial Demand Response - Build | \$850,000 | \$406,333 | (52.2%) | 42,500 | 4,949 | (88.4%) | 4,430 | 241 | (94.6%) | 1,000 | 30 | (97.0%) |
| Nevada Power Total | \$1,500,000 | \$727,312 | (51.5%) | 6,042,500 | 5,290,207 | (12.5%) | 23,495 | 14,315 | (39.1%) | 10,000 | 1,783 | (82.2%) |
| Sierra | | | | | | | | | | | | |
| Commercial Demand Response - Manage | \$250,000 | \$132,779 | (46.9%) | 350,000 | 589,670 | 68.5% | 5,105 | 3,017 | (40.9%) | 2,549 | 369 | (85.5%) |
| Commercial Demand Response - Build | \$450,000 | \$176,934 | (60.7%) | 112,500 | 6,108 | (94.6%) | 466 | 101 | (78.3%) | 1,066 | 11 | (99.0%) |
| Sierra Total | \$700,000 | \$309,713 | (55.8%) | 462,500 | 595,778 | 28.8% | 5,571 | 3,118 | (44.0%) | 3,615 | 380 | (89.5%) |
| NV Energy | | | | | | | | | | | | |
| Commercial Demand Response - Manage | \$900,000 | \$453,758 | (49.6%) | 6,350,000 | 5,874,928 | (7.5%) | 24,170 | 17,091 | (29.3%) | 11,549 | 2,122 | (81.6%) |
| Commercial Demand Response - Build | \$1,300,000 | \$583,267 | (55.1%) | 155,000 | 11,057 | (92.9%) | 4,896 | 342 | (93.0%) | 2,066 | 41 | (98.0%) |
| NV Energy Total | \$2,200,000 | \$1,037,025 | (52.9%) | 6,505,000 | 5,885,985 | (9.5%) | 29,066 | 17,433 | (40.0%) | 13,615 | 2,163 | (84.1%) |

2020 Overall Results and Activities

In 2020, Nevada Power had 1,783 customer sites participating in 23 Events, which includes one operating reserve. Sierra had 380 customer sites participating in 20 Events, which also included one operating reserve. Events use the DR technologies, such as, Pelican, Encycle, Manual DR, Universal Devices, and OpenADR 2.0. Customers are notified by email the day before and the day of each Event. There were no differences in the delivery of this Program between Nevada Power and Sierra.

Additionally, due to device technology, Nevada Power had 925 commercial customer sites that participated in 48 residential Events using the Carrier two-way communication thermostats, which was under the original Cool Share Commercial program that are included in the commercial savings totals.

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Commercial DR – Build and Manage Programs Data Sheet

This Program has been delivered via direct outreach to customers by direct mail, phone calls, emails, and information provided at educational events and on NV Energy's website. Since in-person visits have been paused due to COVID-19 restrictions, other customer outreach avenues have been utilized such as:

- Emails were sent via the Pelican portal to remind customers to save energy by setting back their thermostats for those businesses that were closed due to COVID-19 restrictions.
- Before initiating the Event for the year, a preseason kick off campaign was initiated by email. Customers were reminded that they will save money by participating in the Events, how their network thermostats will be affected, how long the Events are, and the availability of a customer support phone number and email if they had any questions.
- In the early part of the summer, emails were also sent to all participating Program customers to educate them and to remind them that they could save at least ten percent by controlling their network thermostats along with the information it provides, like customized schedules, real-time analytics, data driven energy usage forecast, and historical trend data of their HVAC energy usage and thermostat settings. The email also referred customers to the NV Energy website for the user manual and other commercial business energy efficiency programs. The email also provided a customer support phone number and email for questions.
- In late summer, emails were sent to recruit new customers who were moving into new locations and moving into sites with existing network thermostats. These emails helped notify current customers that they could control network thermostat removal costs and overall asset management. The communication was also a way to control installation cost by notifying new customers of existing network thermostats within their commercial space, and the benefits of the Program by signing a customer application and participating.
- At the end of the Event season, emails were sent to recruit new small and medium commercial customers in northern Nevada and later to resend to those customers that did not open the initial emails or did not click through to NV Energy's website.
- In the fall, a direct mail postcard was sent to small and medium commercial customers to recruit new customers by educating them of the potential savings the Program provides for free, the advantages and convenience of technology to control their thermostats from a smart phone, computer, or tablet, and historical information on AC usage that can be used to detect potential issues.

During 2020, there were no significant changes to the program design; however, activities relating to evaluation, monitoring and verification were made to aid in determining savings and demand reductions:

- The post installation form was modified to include baseline thermostat schedules and set points of existing thermostats, before smart thermostats were installed.

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Sierra Pacific Power Companies d/b/a NV Energy
Commercial DR – Build and Manage Programs Data Sheet

- The demand response management system database has been and will continuously be reconciled for customer sites that no longer active and the status within the database will be changed to inactive
- Customers with Encycle demand limiting technology was checked for connectivity and re-enrolled of inactive sites, after a performance analysis was completed. Further, all customers with these technologies were set on baseline mode (i.e. technology was temporarily suspended in order to establish usage without the technology being active) to aid in verifying energy and demand savings.
- Customers with manual demand response and other customer owned demand response technologies were contacted for their continuous participation in community events.
- The big-box stores (i.e. commercial store chains that resemble a large square structure) were sent emails, with the support of the major accounts department, to remind customers to participate in community events.

2020 Lessons Learned Recommendations

The following were identified as lessons learned or recommendations for the upcoming program years:

- Even though customer emails are a low-cost outreach strategy, the effectiveness was minimal. The open rates range from ten to 27 percent with click through rates from one to 1.58 percent. Even with a second effort to customers that did not open the emails, the open rate was 10 percent with click through rates of less than one percent. Since emails provided only moderate results, a customer engagement strategy is being developed for 2021. Postcards and a follow-up letter will be utilized as a two-prong approach to recruit customers to the Program.
- Direct mail postcards were sent to the business address; however, there was concern that the effectiveness was diluted due to the customer receiving the postcard close to and leading up to the November 2020 election.
- Despite resetting the baseline usage by temporarily turning off the Encycle demand limiting controllers, there were still no energy savings established. Encycle has notified us that they will discontinue support of their controllers by February 2022 due to the loss of second generation and third generation cellular technology support from the cellular provider for which the current technology is based upon. This affects six customers in the southern territory and one customer in the northern territory. A customer strategy is being developed to replace this legacy technology with internet- based smart thermostats with Application Programming Interface (“API”).
- Field service operations will contact the customer by phone to those locations with existing network thermostats in order to recruit these new customers into the Program. A field visit will still be necessary to ensure the customer is educated and the technology is configured to the needs of the new business.

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Commercial DR – Build and Manage Programs Data Sheet

- Outreach to large commercial customers was conducted to ensure their participation in Events, there was still one customer with customer-owned equipment and one customer with manual DR technologies that did not participate in the summer. Target stores with customer-owned equipment were unable to reduce the high number of URLs (i.e. web addresses) to meet the Companies' Information Technology security protocols. Dollar Tree, with manual DR, chose not to participate in the Program in 2019 and 2020, despite efforts to encourage them by direct phone contact.
- The Carrier commercial two-way programmable communication thermostats, affecting 2,825 commercial customers, were installed between 2002 through 2016 with the bulk installed in 2013 in southern Nevada. This proprietary and legacy technology, through instant messaging service, increased fixed cost for this service. With less utility customers using paging technology, cost of service has increased, despite negotiation efforts. Since the contract ends with this provider in 2025, a strategy to substitute this technology with internet-based Wi-Fi smart network thermostat providers is being considered. Possible new technologies under consideration include Pelican, Ecobee, Carrier, and Honeywell smart network thermostats.

2021 Plan

The authorized budgets, projected demand and energy savings targets, and participant goals for the Program for the 2021 program year are provided in Table DSM-65 below.

Table DSM-65: 2021 Commercial DR Authorized Budgets, Savings Targets, and Participant Goals

| 2021 Program Components | Authorized Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goals |
|-------------------------------------|--------------------------|--|---|--------------------------|
| Nevada Power | | | | |
| Commercial Demand Response - Manage | \$650,000 | 23,495 | 6,000,000 | 9,000 |
| Commercial Demand Response - Build | \$850,000 | 4,430 | 150,000 | 1,000 |
| Nevada Power Total | \$1,500,000 | 27,926 | 6,150,000 | 10,000 |
| Sierra | | | | |
| Commercial Demand Response - Manage | \$250,000 | 5,571 | 458,000 | 2,549 |
| Commercial Demand Response - Build | \$450,000 | 466 | 100,000 | 1,066 |
| Sierra Total | \$700,000 | 6,037 | 558,000 | 3,615 |
| NV Energy | | | | |
| Commercial Demand Response - Manage | \$900,000 | 29,066 | 6,458,000 | 11,549 |
| Commercial Demand Response - Build | \$1,300,000 | 4,896 | 250,000 | 2,066 |
| NV Energy Total | \$2,200,000 | 33,963 | 6,708,000 | 13,615 |

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Commercial DR – Build and Manage Programs Data Sheet

NV Energy's 2021 summary of budgets and targets have been provided in the above table. The Program continues to provide offerings to all commercial customers for the 2021 Program year.

NV Energy will launch a PowerShift Smart Shop in 2021. The PowerShift Smart Shop will support the delivery and implementation of approved programs by creating an online platform to educate customers about existing DSM programs and enable customers to purchase competitively priced energy saving products. The PowerShift Smart Shop will provide a channel for customers to purchase authorized variable speed pumps as well as act on tips and recommendations provided by their Online Energy Assessment. The PowerShift Smart Shop will be treated as a marketing expense and will not change program budget goals.

2021 Plan Changes

The following are the Program plan changes that have been implemented or will be implemented during the 2021 program year:

- Evaluate Encycle's new integrations with BMS as a viable program resource. Current customer sites with Encycle connect to BMS controls; thus, standard smart thermostat integration is not viable.
- Enhance use of direct mail to recruit, educate, and inform customers of Program to ensure participation in DR events.
- Evaluate and adopt feasible DR technologies through Program Development field trials.

2022-2024 Proposed Plans

The proposed budget, projected demand and energy savings, and participant goals for the Program for the 2022 through 2024 program years are provided in Table DSM-66 below.

Table DSM-66: 2022-2024 Commercial DR Proposed Budgets, Savings Targets, and Participant Goals

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|-------------------------------------|--------------------|-----------------------------------|------------------------------------|------------------|
| 2022 | | | | |
| Nevada Power | | | | |
| Commercial Demand Response - Manage | \$800,000 | 19,000 | 7,000,000 | 11,100 |
| Commercial Demand Response - Build | \$800,000 | 3,000 | 470,000 | 1,500 |
| Nevada Power Total | \$1,600,000 | 22,000 | 7,470,000 | 12,600 |
| Sierra Program | | | | |
| Commercial Demand Response - Manage | \$320,000 | 3,017 | 750,000 | 2,900 |
| Commercial Demand Response - Build | \$670,000 | 1,000 | 355,000 | 800 |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Commercial DR – Build and Manage Programs Data Sheet**

| Program Components | Proposed Budget | Annual Demand Savings (kW) Target | Annual Energy Savings (kWh) Target | Participant Goal |
|-------------------------------------|--------------------|-----------------------------------|------------------------------------|------------------|
| Sierra Total | \$990,000 | 4,017 | 1,105,000 | 3,700 |
| NV Energy | | | | |
| Commercial Demand Response - Manage | \$1,120,000 | 22,017 | 7,750,000 | 14,000 |
| Commercial Demand Response - Build | \$1,470,000 | 4,000 | 825,000 | 2,300 |
| NV Energy Total | \$2,590,000 | 26,017 | 8,575,000 | 16,300 |
| 2023 | | | | |
| Nevada Power | | | | |
| Commercial Demand Response - Manage | \$900,000 | 21,000 | 6,770,000 | 12,700 |
| Commercial Demand Response - Build | \$800,000 | 3,000 | 470,000 | 1,500 |
| Nevada Power Total | \$1,700,000 | 24,000 | 7,240,000 | 14,200 |
| Sierra Program | | | | |
| Commercial Demand Response - Manage | \$400,000 | 6,000 | 1,030,000 | 3,700 |
| Commercial Demand Response - Build | \$670,000 | 1,000 | 355,000 | 800 |
| Sierra Total | \$1,070,000 | 7,000 | 1,385,000 | 4,500 |
| NV Energy | | | | |
| Commercial Demand Response - Manage | \$1,300,000 | 27,000 | 7,800,000 | 16,400 |
| Commercial Demand Response - Build | \$1,470,000 | 4,000 | 825,000 | 2,300 |
| NV Energy Total | \$2,770,000 | 31,000 | 8,625,000 | 18,700 |
| 2024 | | | | |
| Nevada Power | | | | |
| Commercial Demand Response - Manage | \$1,000,000 | 23,000 | 6,563,000 | 14,200 |
| Commercial Demand Response - Build | \$800,000 | 3,000 | 470,000 | 1,500 |
| Nevada Power Total | \$1,800,000 | 26,000 | 7,033,000 | 15,700 |
| Sierra Program | | | | |
| Commercial Demand Response - Manage | \$400,000 | 7,000 | 1,282,000 | 4,500 |
| Commercial Demand Response - Build | \$670,000 | 1,000 | 355,000 | 800 |
| Sierra Total | \$1,070,000 | 8,000 | 1,637,000 | 5,300 |
| NV Energy | | | | |
| Commercial Demand Response - Manage | \$1,400,000 | 30,000 | 7,845,000 | 18,700 |
| Commercial Demand Response - Build | \$1,470,000 | 4,000 | 825,000 | 2,300 |
| NV Energy Total | \$2,870,000 | 34,000 | 8,670,000 | 21,000 |

NV Energy requests approval for the Program for years 2022 through 2024, as reflected in the budgets and targets provided above.

Based on previous years, the Program focuses on DR load reduction and energy savings. This is accomplished through the use of smart thermostats, demand limiting devices, BMS and message based manual DR to manage AC loads and other ancillary loads for the purposes of load reduction and energy savings. Additionally, the Program is being updated with newer technologies outlined in the 2022 through 2024 Proposed Plan Enhancements, below. The Program promotes and provides materials, installation, and repairs at no cost to the customer for these technologies that save energy and provide convenience in controlling multiple devices at multiple locations.

2022-2024 Proposed Plan Enhancements

Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Commercial DR – Build and Manage Programs Data Sheet

The following are the Program plan enhancements that have been implemented or will be implemented during the 2022 through 2024 action plan period:

- Commercial Electric Vehicle Charging for Demand Response - Residential EV charging provides a unique opportunity to provide DR resources as well as utilizing EV discharging as a DER to bolster the grid. While residential EV charging is largely accounted for with TOU rates, commercial EV charging provides a greater opportunity for DR and Demand Limiting (“DL”) as large number of commercial EV charging stations are in use during the critical DR event hours. The use of a DL strategy versus DR allows the charging station to function, just at a limited rate, for example, 50 percent to 25 percent of the normal rate of the charging station capacity, during a DR event. In 2020, the field tests provided method of integration into the DRMS and DR/DL event strategy data. 2021 will complete the field trial with production gaps provided and full program design, completed. Since this EV charging is not seasonal, this DR resource could provide its load reducing benefits year-around.
- Commercial Energy Storage for Demand Response - Commercial energy storage provides DR resources that include limiting or deferring battery charging during DR events and also utilizing a DERMS to discharge these batteries, either to the premise/building to alleviate load to add energy to the grid. The 2021 Clean Energy Plan provides a pathway for commercial energy storage adoption and as with EV charging, leveraging them for additional year-around DR.
- Phase Change Materials in Commercial Refrigeration Units for Demand Response - As part of the 2021 Clean Energy Plan, PCM was introduced as an energy savings or energy efficiency measure. This unique technology could leverage cold storage solutions as thermal batteries for DR events. As most fielded applications of this technology provide passive cooling for several hours, the use of PCM in cold storage solutions would virtually eliminate the cooling load for the length of the DR event. Field trials for PCM wrap up in 2021 with the method of dispatching being message-based. However, depending on the customer installation, the resource could be dispatched autonomously via the customer BMS. As with all the plan changes, PCM in commercial refrigeration provides the DR benefits, irrespective of season or time, which greatly benefits grid stability for both reliability DR events and as a non-wires alternative for capacity deferment.
- Agricultural Irrigation for Demand Response - While continuing to offer the IS-2 program, a new agricultural irrigation DR program would enable economic dispatch, which is not possible with the current IS-2 program, as IS-2 is tied only to electric grid emergency conditions. Agricultural irrigation provides a greater opportunity for DR as a large number of irrigation pumps are in use during the critical DR event hours. Typically, agricultural irrigation schedules will allow for watering schedules to be shifted outside of the DR event hours using DR. In 2021, a field demonstration will be conducted to field test an innovative two-way communicating technology for VFD optimization and load management on large agricultural irrigation motor applications.

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Commercial DR – Build and Manage Programs Data Sheet**

Measurement and Verification

The M&V reports that provide third-party evaluation results as performed by ADM are included in the Technical Appendices DSM-14 and DSM-17.

Energy Savings Curves

The energy savings curves are provided as part of the M&V report in Technical Appendices DSM-14 and DSM-17, which are calculated by the third-party evaluator ADM.

Incremental Costs

There were no incremental costs to participants or out-of-pocket expenses to the customer in this Program.

Incentives/Rebates

Incentives for commercial customers participating with smart technologies receive materials, installation, and software to access the application portal interface, at no cost to the customer. Participating customers with the manual DR, OpenADR 2.0, and Universal Devices receive \$25.00 per verified kW reduced during each Event. Customers with legacy Carrier thermostats are paid five dollars per device per month through the DR season and receive billing credits as rebates based on energy saved.

Measure Life

As determined in the M&V Report for the Program, the EUL is 10 years for the DR Build for both Nevada Power and Sierra. The EUL for DR Manage at Nevada Power is 6.1 years and 6.6 years for Sierra.

Measure Units

The unit of measure under this Program is average device installed and enrolled.

Savings

The Nevada Power savings for the Build Program was 4,949 kWh with a max load reduction capacity of 61.38 kW. In the Manage Program, the savings were 5,285,258 with a max load reduction capacity of 12,171 kW. The Sierra savings for the Build Program were 6,108 kWh with a max load reduction capacity of 42 kW. In the Manage Program, the verified savings were 589,670 kWh with a max load reduction capacity of 2,840 kW. The DR program design and approach vary from a standard energy efficiency program because a participant is fully active once the thermostat is installed or connected. The Program uses annual savings.

Nevada Power Companies d/b/a as NV Energy

Sierra Pacific Power Companies d/b/a NV Energy

Commercial DR – Build and Manage Programs Data Sheet

Financial Analysis

Financial assumptions are provided in Section 4 of the DSM Plan and are presented on the “Financial Data” section of each output sheet for Nevada Power and Sierra. The following input and output sheets provided are for the cost-benefit analysis. The benefits, costs, net benefits, and benefits/cost ratios for the five tests are provided in the “Stakeholder Perspectives & Tests” section of the output sheet. The section “Utility Savings & Costs” provides the annual and lifetime costs and savings from the utility perspective. The Commercial DR Manage Program has an overall cost effectiveness NTRC score for 2020 of 7.64 for Nevada Power and 4.28 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 4.48 for 2022, 4.40 for 2023, and 4.42 for 2024 for Nevada Power and 1.68 for 2022, 2.66 for 2023, and 3.19 for 2024 for Sierra. The Commercial DR Build Program has an overall cost effectiveness NTRC score for 2020 of 0.70 for Nevada Power and 0.61 for Sierra. The Program has a projected cost effectiveness NTRC ratio of 2.55 for 2022, 2.61 for 2023, and 2.69 for 2024 for Nevada Power and 1.04 for 2022, 1.31 for 2023, and 1.43 for 2024 for Sierra.

Nevada Power Commercial DR Build Input and Output Sheets

Nevada Power - Commercial Demand Response - Build

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross |
|--------------|---------------------------|---------------------|----------------------|------------|----------|------------------|-----------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|--------------|
| Total | | | | | | | 89 | 3 | 241 | 56 | 4,949 | 10.0 | 100.0% |
| 2020 | \$406,333 | \$98,783 | \$268,733 | \$0 | \$38,818 | \$436 | | | | | | | |
| 2021 | \$6,000 | \$1,000 | \$4,000 | | \$1,000 | \$11 | | | | | | | |
| 2022 | \$6,000 | \$1,000 | \$4,000 | | \$1,000 | \$11 | | | | | | | |
| 2023 | \$6,000 | \$1,000 | \$4,000 | | \$1,000 | \$11 | | | | | | | |
| 2024 | \$6,000 | \$1,000 | \$4,000 | | \$1,000 | \$11 | | | | | | | |
| 2025 | \$6,000 | \$1,000 | \$4,000 | | \$1,000 | \$11 | | | | | | | |
| 2026 | \$6,000 | \$1,000 | \$4,000 | | \$1,000 | \$11 | | | | | | | |
| 2027 | \$6,000 | \$1,000 | \$4,000 | | \$1,000 | \$11 | | | | | | | |
| 2028 | \$6,000 | \$1,000 | \$4,000 | | \$1,000 | \$11 | | | | | | | |
| 2029 | \$6,000 | \$1,000 | \$4,000 | | \$1,000 | \$11 | | | | | | | |

*Unit is defined as an average device installed in 2020.

| | | | | |
|--------------------------|------|----|-------|---|
| Device to premise ratio | 2.97 | \$ | 5.84 | Future Utility admin and M&V cost is based on the actual expenses in the commercial manage program in 2020 on a \$/kW basis |
| Gas Savings (Therm/unit) | NA | \$ | 14.98 | Future Implementation cost is based on the actual expenses in the commercial manage program in 2020 on a \$/kW basis |
| Weighted Ave %NRD | 8% | \$ | 1.99 | Future Rebates are based on the actual expenses in the commercial manage program in 2020 on a \$/kW basis |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|--------------------------|------------------------------|-----------------------------------|
| Name: | 2020 DR Commercial Build | Last Updated: | 5/25/2021 20:00 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Commercial - Build |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2029 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$281,236 | \$399,898 | (\$118,662) | 0.70 | \$10.292 |
| Total Resource Cost (TRC) | \$255,669 | \$399,898 | (\$144,229) | 0.64 | \$10.292 |
| Utility Cost Test (UCT) | \$255,669 | \$445,195 | (\$189,525) | 0.57 | \$11.457 |
| Participant Cost Test (PCT) | \$47,886 | \$0 | \$47,886 | | \$0.000 |
| Ratepayer Impact (RIM) | \$255,669 | \$447,785 | (\$192,116) | 0.57 | \$11.524 |
| Societal Cost (SCT) | \$281,327 | \$399,898 | (\$118,571) | 0.70 | \$10.292 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$406,333 | \$6,000 | \$6,000 | \$460,336 |
| Electric Benefits (\$) | \$31,374 | \$32,958 | \$32,927 | \$255,669 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 5,197 | 5,197 | 5,197 | 51,971 |
| Critical Peak Hour Demand (kW) | 268 | 268 | 268 | 268 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,659 | 1,659 | 1,659 | 13,912 |
| Total On Peak Hours (%) | | | | 26.77% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|---------------------|------------------------------|-----------------|
| Name: | Commercial DR Build | Last Updated: | 5/24/2021 |
| Customer Sector: | Commercial | Avg Measure Life: | 10.00 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:53 |
| Start Year: | 2020 | | |
| End Year: | 2029 | | |

ACE guru™ Model

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$281,236 | \$399,898 | (\$118,662) | 0.70 | \$7.695 |
| Total Resource Cost (TRC) | \$255,669 | \$399,898 | (\$144,229) | 0.64 | \$7.695 |
| Utility Cost Test (UCT) | \$255,669 | \$445,192 | (\$189,523) | 0.57 | \$8.566 |
| Participant Cost Test (PCT) | \$47,884 | \$0 | \$47,884 | | \$0.000 |
| Rate Payer Impact (RIM) | \$255,669 | \$447,783 | (\$192,113) | 0.57 | \$8.616 |
| Societal Cost (SCT) | \$281,337 | \$399,898 | (\$118,562) | 0.70 | \$7.695 |

*Includes Rebates Paid to Freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$406,333 | \$6,000 | \$6,000 | \$445,192 |
| Electric Benefit (\$) | \$31,374 | \$32,958 | \$32,927 | \$255,669 |
| Gas Benefit (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 5,197 | 5,197 | 5,197 | 51,971 |
| Critical Peak Hour Demand (kW) | 268 | 268 | 268 | 268 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 1,391 | 1,391 | 1,391 | 13,912 |
| Total on Peak Hours (%) | | | | 26.77% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | <u>Scenarios</u> | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-to-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

Nevada Power - Commercial DR Build 2022

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|-----------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|----------------|
| Total | | | | | | | 1,500 | 2 | 3,000 | 313 | 470,000 | 10.0 | 100.0% |
| 2022 | \$800,000 | \$134,923 | \$622,714 | \$1,529 | \$40,834 | \$ 27 | | | | | | | |
| 2023 | \$125,000 | \$28,000 | \$82,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2024 | \$125,000 | \$28,000 | \$82,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2025 | \$125,000 | \$28,000 | \$82,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2026 | \$125,000 | \$28,000 | \$82,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2027 | \$125,000 | \$28,000 | \$82,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2028 | \$125,000 | \$28,000 | \$82,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2029 | \$125,000 | \$28,000 | \$82,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2030 | \$125,000 | \$28,000 | \$82,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2031 | \$125,000 | \$28,000 | \$82,000 | | \$15,000 | \$ 10 | | | | | | | |

*Unit is defined as an average device installed in 2022.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.96 for DR kWh and the per unit annual kWh savings are adjusted by the 0.96 NTG rate.

Devise to premise ratio 7.21 \$ 9.46 Future Utility admin and M&V cost is based on the actual expenses in the commercial manage program in 2022 on a \$/kW basis
Gas Savings (Therm./unit) NA \$ 27.27 Future Implementation cost is based on the actual expenses in the commercial manage program in 2022 on a \$/kW basis
Weighted Ave % NRD 23% \$ 4.84 Future Rebates are based on the actual expenses in the commercial manage program in 2022 on a \$/kW basis

Nevada Power - Commercial DR Build 2023

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|-----------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|----------------|
| Total | | | | | | | 1,500 | 2 | 3,000 | 313 | 470,000 | 10.0 | 100.0% |
| 2023 | \$800,000 | \$134,923 | \$622,714 | \$1,529 | \$40,834 | \$ 27 | | | | | | | |
| 2024 | \$127,000 | \$29,000 | \$83,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2025 | \$127,000 | \$29,000 | \$83,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2026 | \$127,000 | \$29,000 | \$83,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2027 | \$127,000 | \$29,000 | \$83,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2028 | \$127,000 | \$29,000 | \$83,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2029 | \$127,000 | \$29,000 | \$83,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2030 | \$127,000 | \$29,000 | \$83,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2031 | \$127,000 | \$29,000 | \$83,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2032 | \$127,000 | \$29,000 | \$83,000 | | \$15,000 | \$ 10 | | | | | | | |

*Unit is defined as an average device installed in 2023.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.96 for DR kWh and the per unit annual kWh savings are adjusted by the 0.96 NTG rate.

Devise to premise ratio 7.21 \$ 9.63 Future Utility admin and M&V cost is based on the actual expenses in the commercial manage program in 2020 on a \$/kW basis
Gas Savings (Therm./unit) NA \$ 27.75 Future Implementation cost is based on the actual expenses in the commercial manage program in 2020 on a \$/kW basis
Weighted Ave % NRD 23% \$ 4.93 Future Rebates are based on the actual expenses in the commercial manage program in 2020 on a \$/kW basis

Nevada Power - Commercial DR Build 2024

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|-----------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|----------------|
| Total | | | | | | | 1,500 | 2 | 3,000 | 313 | 470,000 | 10.0 | 100.0% |
| 2024 | \$800,000 | \$134,923 | \$622,714 | \$1,529 | \$40,834 | \$ 27 | | | | | | | |
| 2025 | \$128,000 | \$29,000 | \$84,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2026 | \$128,000 | \$29,000 | \$84,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2027 | \$128,000 | \$29,000 | \$84,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2028 | \$128,000 | \$29,000 | \$84,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2029 | \$128,000 | \$29,000 | \$84,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2030 | \$128,000 | \$29,000 | \$84,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2031 | \$128,000 | \$29,000 | \$84,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2032 | \$128,000 | \$29,000 | \$84,000 | | \$15,000 | \$ 10 | | | | | | | |
| 2033 | \$128,000 | \$29,000 | \$84,000 | | \$15,000 | \$ 10 | | | | | | | |

*Unit is defined as an average device installed in 2024.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.96 for DR kWh and the per unit annual kWh savings are adjusted by the 0.96 NTG rate.

Devise to premise ratio 7.21 \$ 9.76 Future Utility admin and M&V cost is based on the actual expenses in the commercial manage program in 2024 on a \$/kW basis
Gas Savings (Therm./unit) NA \$ 28.15 Future Implementation cost is based on the actual expenses in the commercial manage program in 2024 on a \$/kW basis
Weighted Ave % NRD 23% \$ 5.00 Future Rebates are based on the actual expenses in the commercial manage program in 2024 on a \$/kW basis

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|--------------------------|------------------------------|-----------------------------------|
| Name: | 2022 DR Commercial Build | Last Updated: | 5/25/2021 20:08 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Commercial - Build |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2031 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$3,758,964 | \$1,471,593 | \$2,287,371 | 2.55 | \$0.415 |
| Total Resource Cost (TRC) | \$3,417,240 | \$1,471,593 | \$1,945,647 | 2.32 | \$0.415 |
| Utility Cost Test (UCT) | \$3,417,240 | \$1,609,572 | \$1,807,668 | 2.12 | \$0.454 |
| Participant Cost Test (PCT) | \$375,649 | \$0 | \$375,649 | | \$0.000 |
| Ratepayer Impact (RIM) | \$3,417,240 | \$1,845,713 | \$1,571,527 | 1.85 | \$0.521 |
| Societal Cost (SCT) | \$3,768,142 | \$1,471,593 | \$2,296,550 | 2.56 | \$0.415 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$799,996 | \$125,000 | \$125,000 | \$1,924,996 |
| Electric Benefits (\$) | \$418,598 | \$424,186 | \$420,341 | \$3,417,240 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 473,820 | 473,820 | 473,820 | 4,738,202 |
| Critical Peak Hour Demand (kW) | 3,331 | 3,331 | 3,331 | 3,331 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 130,165 | 130,165 | 130,165 | 1,268,338 |
| Total On Peak Hours (%) | | | | 26.77% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|--------------------------|------------------------------|-----------------------------------|
| Name: | 2023 DR Commercial Build | Last Updated: | 5/25/2021 20:16 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Commercial - Build |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2032 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$3,875,842 | \$1,484,546 | \$2,391,296 | 2.61 | \$0.419 |
| Total Resource Cost (TRC) | \$3,523,492 | \$1,484,546 | \$2,038,946 | 2.37 | \$0.419 |
| Utility Cost Test (UCT) | \$3,523,492 | \$1,622,525 | \$1,900,967 | 2.17 | \$0.458 |
| Participant Cost Test (PCT) | \$375,649 | \$0 | \$375,649 | | \$0.000 |
| Ratepayer Impact (RIM) | \$3,523,492 | \$1,858,666 | \$1,664,826 | 1.90 | \$0.525 |
| Societal Cost (SCT) | \$3,885,350 | \$1,484,546 | \$2,400,804 | 2.62 | \$0.419 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$799,996 | \$127,000 | \$127,000 | \$1,942,996 |
| Electric Benefits (\$) | \$424,186 | \$420,341 | \$441,063 | \$3,523,492 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 473,820 | 473,820 | 473,820 | 4,738,202 |
| Critical Peak Hour Demand (kW) | 3,331 | 3,331 | 3,331 | 3,331 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 130,165 | 130,165 | 130,165 | 1,268,338 |
| Total On Peak Hours (%) | | | | 26.77% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|--------------------------|------------------------------|-----------------------------------|
| Name: | 2024 DR Commercial Build | Last Updated: | 5/25/2021 20:24 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Commercial - Build |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2033 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$4,006,325 | \$1,491,023 | \$2,515,303 | 2.69 | \$0.421 |
| Total Resource Cost (TRC) | \$3,642,114 | \$1,491,023 | \$2,151,091 | 2.44 | \$0.421 |
| Utility Cost Test (UCT) | \$3,642,114 | \$1,629,002 | \$2,013,112 | 2.24 | \$0.460 |
| Participant Cost Test (PCT) | \$375,649 | \$0 | \$375,649 | | \$0.000 |
| Ratepayer Impact (RIM) | \$3,642,114 | \$1,865,143 | \$1,776,971 | 1.95 | \$0.526 |
| Societal Cost (SCT) | \$4,016,112 | \$1,491,023 | \$2,525,089 | 2.69 | \$0.421 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$799,996 | \$128,000 | \$128,000 | \$1,951,996 |
| Electric Benefits (\$) | \$420,341 | \$441,063 | \$455,267 | \$3,642,114 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 473,820 | 473,820 | 473,820 | 4,738,202 |
| Critical Peak Hour Demand (kW) | 3,331 | 3,331 | 3,331 | 3,331 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 130,165 | 130,165 | 130,165 | 1,268,338 |
| Total On Peak Hours (%) | | | | 26.77% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Commercial DR Manage Input and Output Sheets

Nevada Power - Commercial Demand Response - Manage

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross |
|--------------|---------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|--------------|
| Total | | | | | | \$3 | 8,769 | 2 | 14,074 | 603 | 5,285,258 | 6.1 | 100.0% |
| 2020 | \$320,979 | \$82,143 | \$210,881 | \$0 | \$27,956 | | | | | | | | |
| 2021 | \$321,000 | \$82,000 | \$211,000 | | \$28,000 | | | | | | | | |
| 2022 | \$321,000 | \$82,000 | \$211,000 | | \$28,000 | | | | | | | | |
| 2023 | \$321,000 | \$82,000 | \$211,000 | | \$28,000 | | | | | | | | |
| 2024 | \$321,000 | \$82,000 | \$211,000 | | \$28,000 | | | | | | | | |
| 2025 | \$321,000 | \$82,000 | \$211,000 | | \$28,000 | | | | | | | | |

*Unit is defined as an average device managed in 2020.

Devise to premise ratio 5.00
Gas Savings (Therm /unit) NA
Weighted Ave %NRD 21%

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|---------------------------|------------------------------|-----------------------------------|
| Name: | 2020 DR Commercial Manage | Last Updated: | 5/25/2021 19:56 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Commercial - Manage |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2025 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2020PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$11,381,125 | \$1,489,891 | \$9,891,233 | 7.64 | \$0.053 |
| Total Resource Cost (TRC) | \$10,346,477 | \$1,489,891 | \$8,856,586 | 6.94 | \$0.053 |
| Utility Cost Test (UCT) | \$10,346,477 | \$1,632,131 | \$8,714,346 | 6.34 | \$0.058 |
| Participant Cost Test (PCT) | \$2,023,480 | \$0 | \$2,023,480 | | \$0.000 |
| Ratepayer Impact (RIM) | \$10,346,477 | \$3,513,372 | \$6,833,105 | 2.94 | \$0.124 |
| Societal Cost (SCT) | \$11,440,325 | \$1,489,891 | \$9,950,434 | 7.68 | \$0.053 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$320,997 | \$320,973 | \$320,973 | \$1,925,862 |
| Electric Benefits (\$) | \$1,935,203 | \$2,014,041 | \$2,043,954 | \$10,346,477 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 5,550,226 | 5,550,226 | 5,550,226 | 33,301,355 |
| Critical Peak Hour Demand (kW) | 15,626 | 15,626 | 15,626 | 15,626 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 792,612 | 792,612 | 792,612 | 4,661,916 |
| Total On Peak Hours (%) | | | | 14.00% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | <u>Scenarios:</u> | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|----------------------|------------------------------|-----------------|
| Name: | Commercial DR Manage | Last Updated: | 5/24/2021 |
| Customer Sector: | Commercial | Avg Measure Life: | 6.00 |
| Region: | NPC | Date and Time Printed | 5/26/2021 14:53 |
| Start Year: | 2020 | | |
| End Year: | 2025 | | |

ACE guru™ Model

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|--------------------|--|
| NEB Total Resource Cost (NTRC) | \$11,381,127 | \$1,489,891 | \$9,891,236 | 7.64 | \$0.045 |
| Total Resource Cost (TRC) | \$10,346,479 | \$1,489,891 | \$8,856,588 | 6.94 | \$0.045 |
| Utility Cost Test (UCT) | \$10,346,479 | \$1,632,223 | \$8,714,256 | 6.34 | \$0.049 |
| Participant Cost Test (PCT) | \$2,023,573 | \$0 | \$2,023,573 | | \$0.000 |
| Rate Payer Impact (RIM) | \$10,346,479 | \$3,513,464 | \$6,833,015 | 2.94 | \$0.106 |
| Societal Cost (SCT) | \$11,446,248 | \$1,489,891 | \$9,956,357 | 7.68 | \$0.045 |

*Includes Rebates Paid to Freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$320,979 | \$321,000 | \$321,000 | \$1,632,223 |
| Electric Benefit (\$) | \$1,935,198 | \$2,014,042 | \$2,043,955 | \$10,346,479 |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 5,550,226 | 5,550,226 | 5,550,226 | 33,301,355 |
| Critical Peak Hour Demand (kW) | 15,626 | 15,626 | 15,626 | 15,626 |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 |
| Total on Peak Hours (kWh) | 776,986 | 776,986 | 776,986 | 4,661,916 |
| Total on Peak Hours (%) | | | | 14.00% |

*Savings in this Section are Adjusted for Line Loss and Net-to-Gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate | 7.14% | Other Savings | \$0 |
| Rate Escalator | 0.00% | | |
| Inflation Rate (T&D) | 2.00% | <u>Scenarios</u> | |
| Line Loss (Energy) | 4.77% | Measure Life | 100% |
| Line Loss (Demand) | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity (\$/MW) | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh) | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-to-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

Nevada Power - Commercial DR Manage 2022

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / Year) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|----------------|
| Total | | | | | | \$8 | 11,100 | 2 | 19,000 | 631 | 7,000,000 | 5.6 | 100.0% |
| 2022 | \$800,000 | \$179,673 | \$518,051 | \$10,282 | \$91,994 | | | | | | | | |
| 2023 | \$790,000 | \$180,000 | \$518,000 | | \$92,000 | | | | | | | | |
| 2024 | \$790,000 | \$180,000 | \$518,000 | | \$92,000 | | | | | | | | |
| 2025 | \$790,000 | \$180,000 | \$518,000 | | \$92,000 | | | | | | | | |
| 2026 | \$790,000 | \$180,000 | \$518,000 | | \$92,000 | | | | | | | | |
| 2027 | \$790,000 | \$180,000 | \$518,000 | | \$92,000 | | | | | | | | |

*Unit is defined as an average device managed in 2022.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.96 for DR kWh and the per unit annual kWh savings are adjusted by the 0.96 NTG rate.

Device to premise ratio 6.16
Gas Savings (Therm/unit) NA
Weighted Ave % NRD 22%

Nevada Power - Commercial DR Manage 2023

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / Year) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross** |
|-------|---------------------------|---------------------|----------------------|------------|-----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|----------------|
| Total | | | | | | \$8 | 12,700 | 2 | 21,000 | 533 | 6,770,000 | 5.4 | 100.0% |
| 2023 | \$900,000 | \$202,132 | \$582,808 | \$11,568 | \$103,493 | | | | | | | | |
| 2024 | \$888,000 | \$202,000 | \$583,000 | | \$103,000 | | | | | | | | |
| 2025 | \$888,000 | \$202,000 | \$583,000 | | \$103,000 | | | | | | | | |
| 2026 | \$888,000 | \$202,000 | \$583,000 | | \$103,000 | | | | | | | | |
| 2027 | \$888,000 | \$202,000 | \$583,000 | | \$103,000 | | | | | | | | |

*Unit is defined as an average device managed in 2023.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.96 for DR kWh and the per unit annual kWh savings are adjusted by the 0.96 NTG rate.

Device to premise ratio 6.29
Gas Savings (Therm/unit) NA
Weighted Ave % NRD 22%

Nevada Power - Commercial DR Manage 2024

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / Year) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross** |
|-------|---------------------------|---------------------|----------------------|------------|-----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|----------------|
| Total | | | | | | \$8 | 14,200 | 2 | 23,000 | 462 | 6,563,000 | 5.1 | 100.0% |
| 2024 | \$1,000,000 | \$224,591 | \$647,564 | \$12,853 | \$114,992 | | | | | | | | |
| 2025 | \$988,000 | \$225,000 | \$648,000 | | \$115,000 | | | | | | | | |
| 2026 | \$988,000 | \$225,000 | \$648,000 | | \$115,000 | | | | | | | | |
| 2027 | \$988,000 | \$225,000 | \$648,000 | | \$115,000 | | | | | | | | |
| 2028 | \$988,000 | \$225,000 | \$648,000 | | \$115,000 | | | | | | | | |

*Unit is defined as an average device managed in 2024.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.96 for DR kWh and the per unit annual kWh savings are adjusted by the 0.96 NTG rate.

Device to premise ratio 6.39
Gas Savings (Therm/unit) NA
Weighted Ave % NRD 22%

| | | | |
|-------------------------|---------------------------|------------------------------|-----------------------------------|
| Name: | 2022 DR Commercial Manage | Last Updated: | 5/25/2021 20:07 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Commercial - Manage |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2027 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2022PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|-------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$15,935,900 | \$3,559,248 | \$12,376,652 | 4.48 | \$0.099 |
| Total Resource Cost (TRC) | \$14,487,182 | \$3,559,248 | \$10,927,934 | 4.07 | \$0.099 |
| Utility Cost Test (UCT) | \$14,487,182 | \$4,027,153 | \$10,460,029 | 3.60 | \$0.112 |
| Participant Cost Test (PCT) | \$2,870,090 | \$0 | \$2,870,090 | | \$0.000 |
| Ratepayer Impact (RIM) | \$14,487,182 | \$6,419,056 | \$8,068,126 | 2.26 | \$0.179 |
| Societal Cost (SCT) | \$16,021,812 | \$3,559,248 | \$12,462,564 | 4.50 | \$0.099 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project |
|--------------------------------------|-------------|-------------|-------------|---------------|
| Total Utility Investment (\$) | \$800,025 | \$790,019 | \$790,019 | \$4,750,120 |
| Electric Benefits (\$) | \$2,749,333 | \$2,776,918 | \$2,742,034 | \$14,487,182 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 7,056,834 | 7,056,834 | 7,056,834 | 42,341,001 |
| Critical Peak Hour Demand (kW) | 21,095 | 21,095 | 21,095 | 21,095 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,008,993 | 1,008,993 | 1,008,993 | 5,927,392 |
| Total On Peak Hours (%) | | | | 14.00% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|--------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52,165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/kWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|---------------------------|------------------------------|-----------------------------------|
| Name: | 2023 DR Commercial Manage | Last Updated: | 5/25/2021 20:15 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Commercial - Manage |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2027 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2023PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$15,176,166 | \$3,447,087 | \$11,729,080 | 4.40 | \$0.115 |
| Total Resource Cost (TRC) | \$13,796,515 | \$3,447,087 | \$10,349,428 | 4.00 | \$0.115 |
| Utility Cost Test (UCT) | \$13,796,515 | \$3,898,365 | \$9,898,150 | 3.54 | \$0.131 |
| Participant Cost Test (PCT) | \$2,453,737 | \$0 | \$2,453,737 | | \$0.000 |
| Ratepayer Impact (RIM) | \$13,796,515 | \$5,889,255 | \$7,907,260 | 2.34 | \$0.197 |
| Societal Cost (SCT) | \$15,248,379 | \$3,447,087 | \$11,801,292 | 4.42 | \$0.115 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$900,013 | \$887,997 | \$887,997 | \$4,452,001 |
| Electric Benefits (\$) | \$3,047,468 | \$3,011,875 | \$3,177,574 | \$13,796,515 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 6,824,386 | 6,824,386 | 6,824,386 | 34,121,932 |
| Critical Peak Hour Demand (kW) | 23,315 | 23,315 | 23,315 | 23,315 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 978,673 | 978,673 | 978,673 | 4,776,790 |
| Total On Peak Hours (%) | | | | 14.00% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52.165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 100.0% | | |

| | | | |
|-------------------------|---------------------------|------------------------------|-----------------------------------|
| Name: | 2024 DR Commercial Manage | Last Updated: | 5/25/2021 20:24 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Vegas | Energy Savings Curve: | DR Commercial - Manage |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2028 | CAD File Name: | Vegas_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Vegas_2024PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$16,934,082 | \$3,832,722 | \$13,101,361 | 4.42 | \$0.132 |
| Total Resource Cost (TRC) | \$15,394,620 | \$3,832,722 | \$11,561,899 | 4.02 | \$0.132 |
| Utility Cost Test (UCT) | \$15,394,620 | \$4,336,111 | \$11,058,510 | 3.55 | \$0.150 |
| Participant Cost Test (PCT) | \$2,446,459 | \$0 | \$2,446,459 | | \$0.000 |
| Ratepayer Impact (RIM) | \$15,394,620 | \$6,266,327 | \$9,128,293 | 2.46 | \$0.216 |
| Societal Cost (SCT) | \$17,007,756 | \$3,832,722 | \$13,175,034 | 4.44 | \$0.132 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2024 | 2025 | 2026 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$1,000,028 | \$988,020 | \$988,020 | \$4,952,108 |
| Electric Benefits (\$) | \$3,282,188 | \$3,458,097 | \$3,571,294 | \$15,394,620 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 6,616,407 | 6,616,407 | 6,616,407 | 33,082,037 |
| Critical Peak Hour Demand (kW) | 25,536 | 25,536 | 25,536 | 25,536 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 951,778 | 951,778 | 951,778 | 4,631,213 |
| Total On Peak Hours (%) | | | | 14.00% |

*Savings in this section are adjusted for line loss and net-to-gross

| Financial Data | | Secondary Benefits | |
|---|----------|---------------------------|------|
| Discount Rate: | 7.14% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 4.77% | Measure Life | 100% |
| Line Loss (Demand): | 9.93% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$52.165 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.07 | | |
| Gas Retail Rate (\$/therm) | \$0.61 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

Sierra Commercial DR Build Input and Output Sheets

Sierra - Commercial Demand Response - Build

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross |
|--------------|---------------------------|---------------------|----------------------|------------|---------|------------------|-----------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|--------------|
| Total | | | | | | | 41 | 2 | 101 | 149 | 6,108 | 10.0 | 100.0% |
| 2020 | \$176,934 | \$60,691 | \$116,244 | \$0 | \$0 | \$0 | | | | | | | |
| 2021 | \$5,000 | \$1,000 | \$3,000 | | \$1,000 | \$24 | | | | | | | |
| 2022 | \$4,000 | \$0 | \$3,000 | | \$1,000 | \$24 | | | | | | | |
| 2023 | \$4,000 | \$0 | \$3,000 | | \$1,000 | \$24 | | | | | | | |
| 2024 | \$4,000 | \$0 | \$3,000 | | \$1,000 | \$24 | | | | | | | |
| 2025 | \$4,000 | \$0 | \$3,000 | | \$1,000 | \$24 | | | | | | | |
| 2026 | \$4,000 | \$0 | \$3,000 | | \$1,000 | \$24 | | | | | | | |
| 2027 | \$4,000 | \$0 | \$3,000 | | \$1,000 | \$24 | | | | | | | |
| 2028 | \$4,000 | \$0 | \$3,000 | | \$1,000 | \$24 | | | | | | | |
| 2029 | \$4,000 | \$0 | \$3,000 | | \$1,000 | \$24 | | | | | | | |

*Unit is defined as an average device installed in 2020.

| | | | | |
|--------------------------|------|----|-------|--|
| Devise to premise ratio | 3.73 | \$ | 10.44 | Future Utility admin and M&V cost is based on the actuals in the commercial manage program in 2020 on a \$/kW basis |
| Gas Savings (Therm/unit) | NA | \$ | 26.70 | Future Implementation cost is based on the actual expenses in the commercial manage program in 2020 on a \$/kW basis |
| Weighted Ave % NRD | 11% | \$ | 6.87 | Future Rebates are based on the actual expenses in the commercial manage program in 2020 on a \$/kW basis |

| | | | |
|-------------------------|--------------------------|------------------------------|----------------------------------|
| Name: | 2020 DR Commercial Build | Last Updated: | 5/25/2021 19:01 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Commercial - Build |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2029 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|----------------------------------|---------------|------------|-------------------|-----------|-----------------------------------|
| NEB Total Resource Cost (NTRC) | \$121,403 | \$197,626 | (\$76,224) | 0.61 | \$3.997 |
| Total Resource Cost (TRC) | \$110,366 | \$197,626 | (\$87,260) | 0.56 | \$3.997 |
| Utility Cost Test (UCT) | \$110,366 | \$204,211 | (\$93,845) | 0.54 | \$4.130 |
| Participant Cost Test (PCT) | \$9,365 | \$0 | \$9,365 | | \$0.000 |
| Ratepayer Impact (RIM) | \$110,366 | \$206,991 | (\$96,625) | 0.53 | \$4.186 |
| Societal Cost (SCT) | \$121,572 | \$197,626 | (\$76,055) | 0.62 | \$3.997 |

*Includes rebates paid to freeriders

| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project |
|--------------------------------------|-----------|----------|----------|---------------|
| Total Utility Investment (\$) | \$176,934 | \$5,000 | \$4,000 | \$213,934 |
| Electric Benefits (\$) | \$13,297 | \$13,972 | \$14,043 | \$110,366 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 6,519 | 6,519 | 6,519 | 65,187 |
| Critical Peak Hour Demand (kW) | 118 | 118 | 118 | 118 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,506 | 1,506 | 1,506 | 21,256 |
| Total On Peak Hours (%) | | | | 32.61% |

*Savings in this section are adjusted for line loss and net-to-gross

| | | | |
|---|----------|---------------------------|------|
| Financial Data | | Secondary Benefits | |
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | | | | |
|--|---------------------|-----------------------|---------------------------|--------------------------|----------------------|--|
| Name: | Commercial DR Build | Last Updated: | 5/24/2021 | | | |
| Customer Sector: | Commercial | Avg Measure Life: | 10.00 | | | |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:04 | | | |
| Start Year: | 2020 | | | | | |
| End Year: | 2029 | | | | | |
| Notes: | ACE guru™ Model | | | | | |
| | | | | | | |
| <u>Stakeholder Perspectives & Tests</u> | | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B / C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
| NEB Total Resource Cost (NTRC) | | \$121,403 | \$197,626 | (\$76,224) | 0.61 | \$3.032 |
| Total Resource Cost (TRC) | | \$110,366 | \$197,626 | (\$87,260) | 0.56 | \$3.032 |
| Utility Cost Test (UCT) | | \$110,366 | \$204,212 | (\$93,845) | 0.54 | \$3.133 |
| Participant Cost Test (PCT) | | \$9,365 | \$0 | \$9,365 | | \$0.000 |
| Rate Payer Impact (RIM) | | \$110,366 | \$206,991 | (\$96,625) | 0.53 | \$3.175 |
| Societal Cost (SCT) | | \$121,572 | \$197,626 | (\$76,055) | 0.62 | \$3.032 |
| *Includes Rebates Paid to Freeriders | | | | | | |
| <u>Utility Savings & Costs*</u> | | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | | \$176,934 | \$5,000 | \$4,000 | \$204,212 | |
| Electric Benefit (\$) | | \$13,297 | \$13,972 | \$14,043 | \$110,366 | |
| Gas Benefit (\$) | | \$0 | 0 | 0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | | |
| Electric Savings (kWh) | | 6,519 | 6,519 | 6,519 | 65,187 | |
| Critical Peak Hour Demand (kW) | | 118 | 118 | 118 | 118 | |
| Gas Savings (Therms) | | 0 | 0 | 0 | 0 | |
| Total on Peak Hours (kWh) | | 1,389 | 1,389 | 1,389 | 13,886 | |
| Total on Peak Hours (%) | | | | | 21.30% | |
| *Savings in this Section are Adjusted for Line Loss and Net-to-Gross | | | | | | |
| <u>Financial Data</u> | | | <u>Secondary Benefits</u> | | | |
| Discount Rate | | | Other Savings | | \$0 | |
| Rate Escalator | | | | | | |
| Inflation Rate (T&D) | | | <u>Scenarios</u> | | | |
| Line Loss (Energy) | | | Measure Life | | 100% | |
| Line Loss (Demand) | | | Energy Savings | | 100% | |
| Avoided T&D Capacity (\$/MW) | | | Avoided Energy Cost | | 100% | |
| Environmental Adder (SCT Only) | | | Avoided Capacity Cost | | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | | | Incremental Measure Cost | | 100% | |
| Electric Retail Rate (\$/kWh) | | | | | | |
| Gas Retail Rate (\$/therm) | | | | | | |
| Net-to-Gross Ratio | | | | | | |

Sierra - Commercial DR Build 2022

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|---------|------------------|-----------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|----------------|
| Total | | | | | | | 800 | 1 | 1000 | 444 | 355,000 | 10.0 | 100.0% |
| 2022 | \$670,000 | \$126,562 | \$531,975 | \$7,737 | \$3,726 | \$ 2 | | | | | | | |
| 2023 | \$106,000 | \$23,000 | \$75,000 | | \$8,000 | \$ 5 | | | | | | | |
| 2024 | \$106,000 | \$23,000 | \$75,000 | | \$8,000 | \$ 5 | | | | | | | |
| 2025 | \$106,000 | \$23,000 | \$75,000 | | \$8,000 | \$ 5 | | | | | | | |
| 2026 | \$106,000 | \$23,000 | \$75,000 | | \$8,000 | \$ 5 | | | | | | | |
| 2027 | \$106,000 | \$23,000 | \$75,000 | | \$8,000 | \$ 5 | | | | | | | |
| 2028 | \$106,000 | \$23,000 | \$75,000 | | \$8,000 | \$ 5 | | | | | | | |
| 2029 | \$106,000 | \$23,000 | \$75,000 | | \$8,000 | \$ 5 | | | | | | | |
| 2030 | \$106,000 | \$23,000 | \$75,000 | | \$8,000 | \$ 5 | | | | | | | |
| 2031 | \$106,000 | \$23,000 | \$75,000 | | \$8,000 | \$ 5 | | | | | | | |

*Unit is defined as an average device installed in 2022.

**Net-to-gross (NTG) rates are assumed to be 1 for DR.kWh and 0.94 for DR.kWh and theper unit annual kWh savings are adjusted by the 0.94 NTG rate.

Devise to premise ratio 6.64 \$ 22.75 Future Utility admin and M&V cost is based on the actual expenses in the commercial manage program in 2022 on a \$/kW basis
Gas Savings (Therm/unit) NA \$ 74.92 Future Implementation cost is based on the actual expenses in the commercial manage program in 2022 on a \$/kW basis
Weighted Ave % NRD 24% \$ 8.39 Future Rebates are based on the actual expenses in the commercial manage program in 2022 on a \$/kW basis

Sierra - Commercial DR Build 2023

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|---------|------------------|-----------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|----------------|
| Total | | | | | | | 800 | 1 | 1000 | 444 | 355,000 | 10.0 | 100.0% |
| 2023 | \$670,000 | \$126,562 | \$531,975 | \$7,737 | \$3,726 | \$ 2 | | | | | | | |
| 2024 | \$66,000 | \$14,000 | \$47,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2025 | \$66,000 | \$14,000 | \$47,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2026 | \$66,000 | \$14,000 | \$47,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2027 | \$66,000 | \$14,000 | \$47,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2028 | \$66,000 | \$14,000 | \$47,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2029 | \$66,000 | \$14,000 | \$47,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2030 | \$66,000 | \$14,000 | \$47,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2031 | \$66,000 | \$14,000 | \$47,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2032 | \$66,000 | \$14,000 | \$47,000 | | \$5,000 | \$ 3 | | | | | | | |

*Unit is defined as an average device installed in 2023.

**Net-to-gross (NTG) rates are assumed to be 1 for DR.kWh and 0.94 for DR.kWh and theper unit annual kWh savings are adjusted by the 0.94 NTG rate.

Devise to premise ratio 6.64 \$ 14.30 Future Utility admin and M&V cost is based on the actual expenses in the commercial manage program in 2023 on a \$/kW basis
Gas Savings (Therm/unit) NA \$ 47.09 Future Implementation cost is based on the actual expenses in the commercial manage program in 2023 on a \$/kW basis
Weighted Ave % NRD 24% \$ 5.27 Future Rebates are based on the actual expenses in the commercial manage program in 2023 on a \$/kW basis

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

Sierra - Commercial DR Build 2024

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross** |
|--------------|------------------------------|---------------------|----------------------|------------|---------|------------------|-----------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|----------------|
| Total | | | | | | | 800 | 1 | 1000 | 444 | 355,000 | 10.0 | 100.0% |
| 2024 | \$670,000 | \$126,562 | \$531,975 | \$7,737 | \$3,726 | \$ 2 | | | | | | | |
| 2025 | \$57,000 | \$12,000 | \$40,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2026 | \$57,000 | \$12,000 | \$40,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2027 | \$57,000 | \$12,000 | \$40,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2028 | \$57,000 | \$12,000 | \$40,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2029 | \$57,000 | \$12,000 | \$40,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2030 | \$57,000 | \$12,000 | \$40,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2031 | \$57,000 | \$12,000 | \$40,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2032 | \$57,000 | \$12,000 | \$40,000 | | \$5,000 | \$ 3 | | | | | | | |
| 2033 | \$57,000 | \$12,000 | \$40,000 | | \$5,000 | \$ 3 | | | | | | | |

*Unit is defined as an average device installed in 2024.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.94 for DR kWh and the per unit annual kWh savings are adjusted by the 0.94 NTG rate.

Devise to premise ratio 6.64 \$ 12.26 Future Utility admin and M&V cost is based on the actual expenses in the commercial manage program in 2024 on a \$/kW basis
Gas Savings (Therm/unit) NA \$ 40.36 Future Implementation cost is based on the actual expenses in the commercial manage program in 2024 on a \$/kW basis
Weighted Ave % NRD 24% \$ 4.52 Future Rebates are based on the actual expenses in the commercial manage program in 2024 on a \$/kW basis

| | | | |
|-------------------------|--------------------------|------------------------------|----------------------------------|
| Name: | 2022 DR Commercial Build | Last Updated: | 5/25/2021 19:13 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Commercial - Build |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2031 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,359,180 | \$1,311,613 | \$47,567 | 1.04 | \$0.486 |
| Total Resource Cost (TRC) | \$1,235,618 | \$1,311,613 | (\$75,995) | 0.94 | \$0.486 |
| Utility Cost Test (UCT) | \$1,235,618 | \$1,341,676 | (\$106,057) | 0.92 | \$0.497 |
| Participant Cost Test (PCT) | \$189,659 | \$0 | \$189,659 | | \$0.000 |
| Ratepayer Impact (RIM) | \$1,235,618 | \$1,493,535 | (\$257,917) | 0.83 | \$0.553 |
| Societal Cost (SCT) | \$1,369,845 | \$1,311,613 | \$58,232 | 1.04 | \$0.486 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$668,258 | \$102,264 | \$102,264 | \$1,588,634 |
| Electric Benefits (\$) | \$150,257 | \$151,730 | \$147,400 | \$1,235,618 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 356,115 | 356,115 | 356,115 | 3,561,153 |
| Critical Peak Hour Demand (kW) | 1,167 | 1,167 | 1,167 | 1,167 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 77,024 | 77,024 | 77,024 | 1,161,191 |
| Total On Peak Hours (%) | | | | 32.61% |

*Savings in this section are adjusted for line loss and net-to-gross

| | | | |
|---|----------|---------------------------|------|
| Financial Data | | Secondary Benefits | |
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-To-Gross Ratio | 100.0% | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|--------------------------|------------------------------|----------------------------------|
| Name: | 2023 DR Commercial Build | Last Updated: | 5/25/2021 19:20 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Commercial - Build |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2032 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|----------------------|-------------------|---------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,400,313 | \$1,067,965 | \$332,348 | 1.31 | \$0.395 |
| Total Resource Cost (TRC) | \$1,273,012 | \$1,067,965 | \$205,047 | 1.19 | \$0.395 |
| Utility Cost Test (UCT) | \$1,273,012 | \$1,087,491 | \$185,521 | 1.17 | \$0.403 |
| Participant Cost Test (PCT) | \$179,123 | \$0 | \$179,123 | | \$0.000 |
| Ratepayer Impact (RIM) | \$1,273,012 | \$1,239,351 | \$33,661 | 1.03 | \$0.459 |
| Societal Cost (SCT) | \$1,411,142 | \$1,067,965 | \$343,177 | 1.32 | \$0.395 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2023</u> | <u>2024</u> | <u>2025</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$668,258 | \$63,664 | \$63,664 | \$1,241,234 | |
| Electric Benefits (\$) | \$151,730 | \$147,400 | \$156,386 | \$1,273,012 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 356,115 | 356,115 | 356,115 | 3,561,153 | |
| Critical Peak Hour Demand (kW) | 1,167 | 1,167 | 1,167 | 1,167 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 77,024 | 77,024 | 77,024 | 1,161,191 | |
| Total On Peak Hours (%) | | | | 32.61% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | | | <u>Secondary Benefits</u> | | |
| Discount Rate: | 6.75% | | Other Savings | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | <u>Scenarios:</u> | | |
| Line Loss (Energy): | 6.30% | | Measure Life | 100% | |
| Line Loss (Demand): | 14.31% | | Energy Savings | 100% | |
| Avoided T&D Capacity \$/MW: | \$46,748 | | Avoided Energy Cost | 100% | |
| Environmental Adder (SCT only) | 10.00% | | Avoided Capacity Cost | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | | Incremental Measure Cost | 100% | |
| Electric Retail Rate (\$/KWh): | \$0.06 | | | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

| | | | |
|-------------------------|--------------------------|------------------------------|----------------------------------|
| Name: | 2024 DR Commercial Build | Last Updated: | 5/25/2021 19:31 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Commercial - Build |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2033 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|--|----------------------|-------------------|---------------------------|----------------------|--|
| NEB Total Resource Cost (NTRC) | \$1,446,388 | \$1,008,698 | \$437,690 | 1.43 | \$0.373 |
| Total Resource Cost (TRC) | \$1,314,898 | \$1,008,698 | \$306,200 | 1.30 | \$0.373 |
| Utility Cost Test (UCT) | \$1,314,898 | \$1,028,225 | \$286,673 | 1.28 | \$0.381 |
| Participant Cost Test (PCT) | \$179,123 | \$0 | \$179,123 | | \$0.000 |
| Ratepayer Impact (RIM) | \$1,314,898 | \$1,180,085 | \$134,814 | 1.11 | \$0.437 |
| Societal Cost (SCT) | \$1,457,376 | \$1,008,698 | \$448,678 | 1.44 | \$0.373 |
| *Includes rebates paid to freeriders | | | | | |
| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> | |
| Total Utility Investment (\$) | \$668,258 | \$54,664 | \$54,664 | \$1,160,234 | |
| Electric Benefits (\$) | \$147,400 | \$156,386 | \$161,434 | \$1,314,898 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 356,115 | 356,115 | 356,115 | 3,561,153 | |
| Critical Peak Hour Demand (kW) | 1,167 | 1,167 | 1,167 | 1,167 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 77,024 | 77,024 | 77,024 | 1,161,191 | |
| Total On Peak Hours (%) | | | | 32.61% | |
| *Savings in this section are adjusted for line loss and net-to-gross | | | | | |
| <u>Financial Data</u> | | | <u>Secondary Benefits</u> | | |
| Discount Rate: | 6.75% | | Other Savings | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | <u>Scenarios:</u> | | |
| Line Loss (Energy): | 6.30% | | Measure Life | 100% | |
| Line Loss (Demand): | 14.31% | | Energy Savings | 100% | |
| Avoided T&D Capacity \$/MW: | \$46,748 | | Avoided Energy Cost | 100% | |
| Environmental Adder (SCT only) | 10.00% | | Avoided Capacity Cost | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | | Incremental Measure Cost | 100% | |
| Electric Retail Rate (\$/KWh): | \$0.06 | | | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

**Nevada Power Companies d/b/a as NV Energy
Sierra Pacific Power Companies d/b/a NV Energy
Commercial DR – Build and Manage Programs Data Sheet**

Sierra Commercial DR Manage Input and Output Sheets

Sierra - Commercial Demand Response - Manage

| Year | Total Actual Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / unit) | Capacity Savings (kW) | Annual Savings (kWh / unit) | Total Annual Savings (kWh / Year) | Effective Useful Life | Net-to-Gross |
|--------------|---------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------------|-----------------------|-----------------------------|-----------------------------------|-----------------------|--------------|
| Total | | | | | | \$8 | 2,468 | 1 | 3,017 | 239 | 589,670 | 6.6 | 100.0% |
| 2020 | \$132,779 | \$31,486 | \$80,568 | \$0 | \$20,725 | | | | | | | | |
| 2021 | \$133,000 | \$31,000 | \$81,000 | | \$21,000 | | | | | | | | |
| 2022 | \$133,000 | \$31,000 | \$81,000 | | \$21,000 | | | | | | | | |
| 2023 | \$133,000 | \$31,000 | \$81,000 | | \$21,000 | | | | | | | | |
| 2024 | \$133,000 | \$31,000 | \$81,000 | | \$21,000 | | | | | | | | |
| 2025 | \$133,000 | \$31,000 | \$81,000 | | \$21,000 | | | | | | | | |
| 2026 | \$133,000 | \$31,000 | \$81,000 | | \$21,000 | | | | | | | | |

*Unit is defined as an average device managed in 2020.

Devise to premise ratio 6.69
Gas Savings (Therm/unit) NA
Weighted Ave %NRD 24%

| | | | |
|-------------------------|---------------------------|------------------------------|----------------------------------|
| Name: | 2020 DR Commercial Manage | Last Updated: | 5/25/2021 19:01 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Commercial - Manage |
| Start Year: | 2020 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2026 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2020PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$2,784,446 | \$650,052 | \$2,134,394 | 4.28 | \$0.178 |
| Total Resource Cost (TRC) | \$2,531,315 | \$650,052 | \$1,881,263 | 3.89 | \$0.178 |
| Utility Cost Test (UCT) | \$2,531,315 | \$771,671 | \$1,759,644 | 3.28 | \$0.211 |
| Participant Cost Test (PCT) | \$326,949 | \$0 | \$326,949 | | \$0.000 |
| Ratepayer Impact (RIM) | \$2,531,315 | \$977,001 | \$1,554,313 | 2.59 | \$0.268 |
| Societal Cost (SCT) | \$2,795,985 | \$650,052 | \$2,145,933 | 4.30 | \$0.178 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$132,785 | \$133,003 | \$133,003 | \$930,802 |
| Electric Benefits (\$) | \$408,206 | \$427,075 | \$435,510 | \$2,531,315 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 629,317 | 629,317 | 629,317 | 4,405,219 |
| Critical Peak Hour Demand (kW) | 3,521 | 3,521 | 3,521 | 3,521 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 139,360 | 139,360 | 139,360 | 1,522,253 |
| Total On Peak Hours (%) | | | | 34.56% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | <u>Secondary Benefits</u> |
|---|---------------------------|
| Discount Rate: | 6.75% |
| Rate Escalator: | 0.00% |
| Inflation Rate (T&D): | 2.00% |
| Line Loss (Energy): | 6.30% |
| Line Loss (Demand): | 14.31% |
| Avoided T&D Capacity \$/MW: | \$46,748 |
| Environmental Adder (SCT only) | 10.00% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% |
| Electric Retail Rate (\$/KWh): | \$0.06 |
| Gas Retail Rate (\$/therm) | \$0.42 |
| Net-To-Gross Ratio | 100.0% |

| | |
|--------------------------|------|
| Scenarios: | |
| Measure Life | 100% |
| Energy Savings | 100% |
| Avoided Energy Cost | 100% |
| Avoided Capacity Cost | 100% |
| Incremental Measure Cost | 100% |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | | | |
|--|----------------------|--------------------------|-------------------|---------------|-----------------|
| Name: | Commercial DR Manage | Last Updated: | 5/24/2021 | | |
| Customer Sector: | Commercial | Avg Measure Life: | 7.00 | | |
| Region: | SPPC | Time and Date Printed | 5/26/2021 16:05 | | |
| Start Year: | 2020 | | | | |
| End Year: | 2026 | ACE guru™ Model | | | |
| Notes: | | | | | |
| | | Cost of Conserved | | | |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B / C Ratio | Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$2,784,446 | \$650,052 | \$2,134,394 | 4.28 | \$0.148 |
| Total Resource Cost (TRC) | \$2,531,315 | \$650,052 | \$1,881,263 | 3.89 | \$0.148 |
| Utility Cost Test (UCT) | \$2,531,315 | \$771,651 | \$1,759,663 | 3.28 | \$0.175 |
| Participant Cost Test (PCT) | \$326,930 | \$0 | \$326,930 | | \$0.000 |
| Rate Payer Impact (RIM) | \$2,531,315 | \$976,982 | \$1,554,333 | 2.59 | \$0.222 |
| Societal Cost (SCT) | \$2,795,984 | \$650,052 | \$2,145,932 | 4.30 | \$0.148 |
| *Includes Rebates Paid to Freeriders | | | | | |
| Utility Savings & Costs* | 2020 | 2021 | 2022 | Total Project | |
| Total Utility Investment (\$) | \$132,779 | \$133,000 | \$133,000 | \$771,651 | |
| Electric Benefit (\$) | \$408,206 | \$427,075 | \$435,510 | \$2,531,315 | |
| Gas Benefit (\$) | \$0 | 0 | 0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 629,317 | 629,317 | 629,317 | 4,405,219 | |
| Critical Peak Hour Demand (kW) | 3,521 | 3,521 | 3,521 | 3,521 | |
| Gas Savings (Therms) | 0 | 0 | 0 | 0 | |
| Total on Peak Hours (kWh) | 135,839 | 135,839 | 135,839 | 950,875 | |
| Total on Peak Hours (%) | | | | 21.59% | |
| *Savings in this Section are Adjusted for Line Loss and Net-to-Gross | | | | | |
| Financial Data | | Secondary Benefits | | | |
| Discount Rate | 6.75% | Other Savings | | \$0 | |
| Rate Escalator | 0.00% | | | | |
| Inflation Rate (T&D) | 2.00% | Scenarios | | | |
| Line Loss (Energy) | 6.30% | Measure Life | | 100% | |
| Line Loss (Demand) | 14.31% | Energy Savings | | 100% | |
| Avoided T&D Capacity (\$/MW) | \$46,748 | Avoided Energy Cost | | 100% | |
| Environmental Adder (SCT Only) | 10.00% | Avoided Capacity Cost | | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | | 100% | |
| Electric Retail Rate (\$/kWh) | \$0.06 | | | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | | | |
| Net-to-Gross Ratio | 100.00% | | | | |

Sierra - Commercial DR Manage 2022

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / | Capacity Savings (kW) | Annual Savings (kWh / | Total Annual Savings | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------|-----------------------|-----------------------|----------------------|-----------------------|----------------|
| Total | | | | | | \$9 | 2,900 | 1 | 3,017 | 259 | 750,000 | 5.2 | 100.0% |
| 2022 | \$320,000 | \$68,644 | \$226,039 | \$0 | \$25,317 | | | | | | | | |
| 2023 | \$320,000 | \$69,000 | \$226,000 | | \$25,000 | | | | | | | | |
| 2024 | \$320,000 | \$69,000 | \$226,000 | | \$25,000 | | | | | | | | |
| 2025 | \$320,000 | \$69,000 | \$226,000 | | \$25,000 | | | | | | | | |
| 2026 | \$320,000 | \$69,000 | \$226,000 | | \$25,000 | | | | | | | | |

*Unit is defined as an average device managed in 2022.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.94 for DR kWh and theper unit annual kWh savings are adjusted by the 0.94 NTG rate.

Devise to premise ratio 6.64
Gas Savings (Therm/unit) NA
Weighted Ave % NRD 24%

Sierra - Commercial DR Manage 2023

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / | Capacity Savings (kW) | Annual Savings (kWh / | Total Annual Savings | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------|-----------------------|-----------------------|----------------------|-----------------------|----------------|
| Total | | | | | | \$9 | 3,700 | 2 | 6,000 | 278 | 1,030,000 | 5.3 | 100.0% |
| 2023 | \$400,000 | \$85,805 | \$282,549 | \$0 | \$31,647 | | | | | | | | |
| 2024 | \$401,000 | \$86,000 | \$283,000 | | \$32,000 | | | | | | | | |
| 2025 | \$401,000 | \$86,000 | \$283,000 | | \$32,000 | | | | | | | | |
| 2026 | \$401,000 | \$86,000 | \$283,000 | | \$32,000 | | | | | | | | |
| 2027 | \$401,000 | \$86,000 | \$283,000 | | \$32,000 | | | | | | | | |

*Unit is defined as an average device managed in 2023.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.94 for DR kWh and theper unit annual kWh savings are adjusted by the 0.94 NTG rate.

Devise to premise ratio 6.64
Gas Savings (Therm/unit) NA
Weighted Ave % NRD 24%

Sierra - Commercial DR Manage 2024

| Year | Total Projected Expenditures | Utility Admin & M&V | Implementation Costs | Incentives | Rebates | Rebates per unit | Total Number of Units* | Capacity Savings (kW / | Capacity Savings (kW) | Annual Savings (kWh / | Total Annual Savings | Effective Useful Life | Net-to-Gross** |
|-------|------------------------------|---------------------|----------------------|------------|----------|------------------|------------------------|------------------------|-----------------------|-----------------------|----------------------|-----------------------|----------------|
| Total | | | | | | \$7 | 4,500 | 2 | 7,000 | 285 | 1,282,000 | 5.1 | 100.0% |
| 2024 | \$400,000 | \$85,805 | \$282,549 | \$0 | \$31,647 | | | | | | | | |
| 2025 | \$401,000 | \$86,000 | \$283,000 | | \$32,000 | | | | | | | | |
| 2026 | \$401,000 | \$86,000 | \$283,000 | | \$32,000 | | | | | | | | |
| 2027 | \$401,000 | \$86,000 | \$283,000 | | \$32,000 | | | | | | | | |
| 2028 | \$401,000 | \$86,000 | \$283,000 | | \$32,000 | | | | | | | | |

*Unit is defined as an average device managed in 2024.

**Net-to-gross (NTG) rates are assumed to be 1 for DR kW and 0.94 for DR kWh and theper unit annual kWh savings are adjusted by the 0.94 NTG rate.

Devise to premise ratio 6.64
Gas Savings (Therm/unit) NA
Weighted Ave % NRD 24%

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | | | |
|---|---------------------------|------------------------------|----------------------------------|----------------------|--|
| Name: | 2022 DR Commercial Manage | Last Updated: | 5/25/2021 19:13 | | |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 | | |
| Region : | Reno | Energy Savings Curve: | DR Commercial - Manage | | |
| Start Year: | 2022 | Model File Name: | DSM_PortPro_April2021_AY.xlsm | | |
| End Year: | 2026 | CAD File Name: | Reno_CAD_April2021_AY.xlsx | | |
| Notes: | | Program DB Name: | PD_Reno_2022PY_April2021_AY.xlsx | | |
| | | | | | |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$2,181,018 | \$1,299,576 | \$881,442 | 1.68 | \$0.392 |
| Total Resource Cost (TRC) | \$1,982,744 | \$1,299,576 | \$683,168 | 1.53 | \$0.392 |
| Utility Cost Test (UCT) | \$1,982,744 | \$1,410,046 | \$572,698 | 1.41 | \$0.425 |
| Participant Cost Test (PCT) | \$296,859 | \$0 | \$296,859 | | \$0.000 |
| Ratepayer Impact (RIM) | \$1,982,744 | \$1,596,435 | \$386,309 | 1.24 | \$0.482 |
| Societal Cost (SCT) | \$2,192,783 | \$1,299,576 | \$893,207 | 1.69 | \$0.392 |
| <i>*Includes rebates paid to freeriders</i> | | | | | |
| Utility Savings & Costs* | 2022 | 2023 | 2024 | Total Project | |
| Total Utility Investment (\$) | \$320,000 | \$319,998 | \$319,998 | \$1,599,992 | |
| Electric Benefits (\$) | \$440,113 | \$445,142 | \$435,466 | \$1,982,744 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 752,391 | 752,391 | 752,391 | 3,761,953 | |
| Critical Peak Hour Demand (kW) | 3,521 | 3,521 | 3,521 | 3,521 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 165,926 | 165,926 | 165,926 | 1,299,968 | |
| Total On Peak Hours (%) | | | | 34.56% | |
| <i>*Savings in this section are adjusted for line loss and net-to-gross</i> | | | | | |
| Financial Data | | | Secondary Benefits | | |
| Discount Rate: | 6.75% | | Other Savings | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | Scenarios: | | |
| Line Loss (Energy): | 6.30% | | Measure Life | 100% | |
| Line Loss (Demand): | 14.31% | | Energy Savings | 100% | |
| Avoided T&D Capacity \$/MW: | \$46,748 | | Avoided Energy Cost | 100% | |
| Environmental Adder (SCT only) | 10.00% | | Avoided Capacity Cost | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | | Incremental Measure Cost | 100% | |
| Electric Retail Rate (\$/KWh): | \$0.06 | | | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

| | | | | | |
|---|---------------------------|------------------------------|----------------------------------|----------------------|--|
| Name: | 2023 DR Commercial Manage | Last Updated: | 5/25/2021 19:20 | | |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 | | |
| Region : | Reno | Energy Savings Curve: | DR Commercial - Manage | | |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm | | |
| End Year: | 2027 | CAD File Name: | Reno_CAD_April2021_AY.xlsx | | |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx | | |
| | | | | | |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$4,326,447 | \$1,625,322 | \$2,701,125 | 2.66 | \$0.357 |
| Total Resource Cost (TRC) | \$3,933,133 | \$1,625,322 | \$2,307,812 | 2.42 | \$0.357 |
| Utility Cost Test (UCT) | \$3,933,133 | \$1,765,979 | \$2,167,155 | 2.23 | \$0.388 |
| Participant Cost Test (PCT) | \$396,659 | \$0 | \$396,659 | | \$0.000 |
| Ratepayer Impact (RIM) | \$3,933,133 | \$2,021,980 | \$1,911,153 | 1.95 | \$0.444 |
| Societal Cost (SCT) | \$4,342,781 | \$1,625,322 | \$2,717,459 | 2.67 | \$0.357 |
| <i>*Includes rebates paid to freeriders</i> | | | | | |
| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project | |
| Total Utility Investment (\$) | \$399,989 | \$401,005 | \$401,005 | \$2,004,009 | |
| Electric Benefits (\$) | \$867,934 | \$853,016 | \$897,480 | \$3,933,133 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 1,033,394 | 1,033,394 | 1,033,394 | 5,166,969 | |
| Critical Peak Hour Demand (kW) | 7,002 | 7,002 | 7,002 | 7,002 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 230,062 | 230,062 | 230,062 | 1,785,481 | |
| Total On Peak Hours (%) | | | | 34.56% | |
| <i>*Savings in this section are adjusted for line loss and net-to-gross</i> | | | | | |
| Financial Data | | | Secondary Benefits | | |
| Discount Rate: | 6.75% | | Other Savings | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | | Scenarios: | | |
| Line Loss (Energy): | 6.30% | | Measure Life | 100% | |
| Line Loss (Demand): | 14.31% | | Energy Savings | 100% | |
| Avoided T&D Capacity \$/MW: | \$46,748 | | Avoided Energy Cost | 100% | |
| Environmental Adder (SCT only) | 10.00% | | Avoided Capacity Cost | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | | Incremental Measure Cost | 100% | |
| Electric Retail Rate (\$/KWh): | \$0.06 | | | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

| | | | | | |
|---|---------------------------|------------------------------|----------------------------------|----------------------|--|
| Name: | 2023 DR Commercial Manage | Last Updated: | 5/25/2021 19:20 | | |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 | | |
| Region : | Reno | Energy Savings Curve: | DR Commercial - Manage | | |
| Start Year: | 2023 | Model File Name: | DSM_PortPro_April2021_AY.xlsm | | |
| End Year: | 2027 | CAD File Name: | Reno_CAD_April2021_AY.xlsx | | |
| Notes: | | Program DB Name: | PD_Reno_2023PY_April2021_AY.xlsx | | |
| | | | | | |
| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
| NEB Total Resource Cost (NTRC) | \$4,326,447 | \$1,625,322 | \$2,701,125 | 2.66 | \$0.357 |
| Total Resource Cost (TRC) | \$3,933,133 | \$1,625,322 | \$2,307,812 | 2.42 | \$0.357 |
| Utility Cost Test (UCT) | \$3,933,133 | \$1,765,979 | \$2,167,155 | 2.23 | \$0.388 |
| Participant Cost Test (PCT) | \$396,659 | \$0 | \$396,659 | | \$0.000 |
| Ratepayer Impact (RIM) | \$3,933,133 | \$2,021,980 | \$1,911,153 | 1.95 | \$0.444 |
| Societal Cost (SCT) | \$4,342,781 | \$1,625,322 | \$2,717,459 | 2.67 | \$0.357 |
| <i>*Includes rebates paid to free riders</i> | | | | | |
| Utility Savings & Costs* | 2023 | 2024 | 2025 | Total Project | |
| Total Utility Investment (\$) | \$399,989 | \$401,005 | \$401,005 | \$2,004,009 | |
| Electric Benefits (\$) | \$867,934 | \$853,016 | \$897,480 | \$3,933,133 | |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 | |
| Incremental Energy & Demand Savings: | | | | | |
| Electric Savings (kWh) | 1,033,394 | 1,033,394 | 1,033,394 | 5,166,969 | |
| Critical Peak Hour Demand (kW) | 7,002 | 7,002 | 7,002 | 7,002 | |
| Gas Savings (therms) | 0 | 0 | 0 | 0 | |
| Total On Peak Hours (kWh) | 230,062 | 230,062 | 230,062 | 1,785,481 | |
| Total On Peak Hours (%) | | | | 34.56% | |
| <i>*Savings in this section are adjusted for line loss and net-to-gross</i> | | | | | |
| Financial Data | | Secondary Benefits | | | |
| Discount Rate: | 6.75% | Other Savings | | \$0 | |
| Rate Escalator: | 0.00% | | | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | | | |
| Line Loss (Energy): | 6.30% | Measure Life | | 100% | |
| Line Loss (Demand): | 14.31% | Energy Savings | | 100% | |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | | 100% | |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | | 100% | |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | | 100% | |
| Electric Retail Rate (\$/KWh): | \$0.06 | | | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | | | |
| Net-To-Gross Ratio | 100.0% | | | | |

Nevada Power Companies d/b/a as NV Energy Sierra Pacific Power Companies d/b/a NV Energy Commercial DR – Build and Manage Programs Data Sheet

| | | | |
|-------------------------|---------------------------|------------------------------|----------------------------------|
| Name: | 2024 DR Commercial Manage | Last Updated: | 5/25/2021 19:31 |
| Customer Sector: | Commercial | Avg Measure Life: | 1.00 |
| Region : | Reno | Energy Savings Curve: | DR Commercial - Manage |
| Start Year: | 2024 | Model File Name: | DSM_PortPro_April2021_AY.xlsm |
| End Year: | 2028 | CAD File Name: | Reno_CAD_April2021_AY.xlsx |
| Notes: | | Program DB Name: | PD_Reno_2024PY_April2021_AY.xlsx |

| <u>Stakeholder Perspectives & Tests</u> | <u>Benefits (PV)</u> | <u>Costs (PV)</u> | <u>Net Benefits (PV)</u> | <u>B/C Ratio</u> | <u>Cost of Conserved Energy (\$/kWh)</u> |
|---|----------------------|-------------------|--------------------------|------------------|--|
| NEB Total Resource Cost (NTRC) | \$5,178,857 | \$1,625,321 | \$3,553,536 | 3.19 | \$0.287 |
| Total Resource Cost (TRC) | \$4,708,052 | \$1,625,321 | \$3,082,731 | 2.90 | \$0.287 |
| Utility Cost Test (UCT) | \$4,708,052 | \$1,765,944 | \$2,942,108 | 2.67 | \$0.312 |
| Participant Cost Test (PCT) | \$459,234 | \$0 | \$459,234 | | \$0.000 |
| Ratepayer Impact (RIM) | \$4,708,052 | \$2,084,554 | \$2,623,498 | 2.26 | \$0.368 |
| Societal Cost (SCT) | \$5,199,359 | \$1,625,321 | \$3,574,039 | 3.20 | \$0.287 |

*Includes rebates paid to freeriders

| <u>Utility Savings & Costs*</u> | <u>2024</u> | <u>2025</u> | <u>2026</u> | <u>Total Project</u> |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$399,988 | \$400,995 | \$400,995 | \$2,003,968 |
| Electric Benefits (\$) | \$997,447 | \$1,050,010 | \$1,083,909 | \$4,708,052 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 1,286,126 | 1,286,126 | 1,286,126 | 6,430,629 |
| Critical Peak Hour Demand (kW) | 8,169 | 8,169 | 8,169 | 8,169 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 285,782 | 285,782 | 285,782 | 2,222,147 |
| Total On Peak Hours (%) | | | | 34.56% |

*Savings in this section are adjusted for line loss and net-to-gross

| <u>Financial Data</u> | | <u>Secondary Benefits</u> | |
|---|----------|---------------------------|------|
| Discount Rate: | 6.75% | Other Savings | \$0 |
| Rate Escalator: | 0.00% | | |
| Inflation Rate (T&D): | 2.00% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 14.31% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$46,748 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Non-Energy Benefit Adder (NTRC and SCT) | 10.00% | Incremental Measure Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.06 | | |
| Gas Retail Rate (\$/therm) | \$0.42 | | |
| Net-To-Gross Ratio | 100.0% | | |

DSM-1



DSM PORTFOLIO PRO: ELECTRIC MODEL USER MANUAL

May 2016

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Overview of Cost-Effectiveness Analysis

Strategies that improve energy efficiency prove beneficial, at least from a societal viewpoint, as long as their costs can be justified by their economic worth. However, benefits from energy-efficiency improvements may accrue in varying ways for different stakeholders.

Utilities sponsoring energy efficiency programs pose significant questions concerning equity, since, under most circumstances, such actions lead to rate increases.¹ Analysts have struggled to determine how conservation affects utilities, participants, ratepayers, and society. The energy sector widely uses avoided cost analysis to assess the cost-effectiveness (or net benefits) of demand-side management (DSM) relative to conventional supply alternatives.

When calculating DSM benefits, analysts begin by adjusting avoided costs for administrative or programmatic costs as well as other expenses associated with participating in DSM programs. Depending on the analysis perspective taken, competing views can emerge regarding benefits. Generally, the following five basic tests provide comparisons of demand and supply management alternatives, with each representing a measure of cost-effectiveness from various unique perspectives:

- Total Resource Costs (TRC)
- Rate Impact Measure (RIM)
- Utility Cost Test (UCT)
- Participant Cost Test (PCT)
- Societal Cost Test (SCT)

Table 1 summarizes potential DSM benefits, relevant costs, and the allocations of these from the five perspectives. Each assessment begins using the gross DSM benefits, measured by the utility's avoided cost, and subtracts the costs associated with the program (such as equipment, labor, and overhead).

From a TRC perspective, a conservation measure or practice fails if it produces negative net benefits, meaning the costs of achieving savings outweigh the savings' value. Some conservation methods pass one test while failing others. The TRC test can be used to evaluate DSM's effect on total outlays for utility services (for both participants and nonparticipants), and has been defined not as a test of "least cost" but of "most value."²

¹ An exception occurs when the average per-unit cost of conservation falls below the difference between the utility's rate and its avoided resource costs.

² Beecher, Janice A. *Avoided Cost: An Essential Concept for Integrated Resource Planning*. Center for Urban Policy and the Environment, Indiana University-Purdue University, Indianapolis. 1998.



Table 1. Alternative Measures of Program Performance

| Elements | TRC | RIM | UCT | PCT | SCT |
|--------------------------------|-----|-----|-----|-----|-----|
| Benefits | | | | | |
| Avoided Power Supply Costs | √ | √ | √ | | √ |
| Avoided T&D Costs | √ | √ | √ | | √ |
| Bill Reductions | | | | √ | |
| Rebates | | | | √ | |
| Environmental Adder | | | | | √ |
| Indirect Fuel Benefits | √ | | | | √ |
| Indirect Other Benefits | | | | | √ |
| Costs | | | | | |
| Direct Utility DSM Costs | √ | √ | √ | | √ |
| Direct Customer DSM Costs | √ | | | √ | √ |
| Utility Program Administration | √ | √ | √ | | √ |
| Lost Revenues | | √ | | | |

Conservation programs' effects on utility rates can be measured by the RIM test, also known as the nonparticipant or no-loser test because it recognizes the potential for lost revenues and the need for nonparticipants to subsidize participants through higher utility rates. The test emphasizes DSM's distributional (equity) effects. Per this test, demand-side options should be implemented only when the end result increases utility revenue requirements by an amount less than the increase in revenue requirements associated with various supply-side options. Determining actual rate impacts also can be used to more directly measure equity in conservation investment decisions.

The UCT emphasizes the use of utility resources to test cost-effectiveness. Per this test, demand-side options should be implemented when the value of acquired conservation resources justifies the utility's portion of conservation costs. This test does not account for sales lost due to conservation.

The PCT evaluates whether the net benefits provided by DSM programs sufficiently motivate customers' participation.

Finally, the SCT measures DSM's complete societal benefits, including indirect benefits (mainly arising from avoided environmental externalities, such as emissions).

Though such cost-effectiveness tests reflect different vantage points, they cannot be considered entirely independent.³ A demand-side measure passing the RIM test can be presumed to pass the UCT. The TRC test essentially represents the sum of the RIM test and the PCT. The TRC test and PCT formulas can be modified to include indirect costs, such as participants' investments in time, and the RIM test and PCT

³ Berman, J.S. and D.M. Logan. *A Comprehensive Cost-Effectiveness Methodology for Integrated Least-Cost Planning*. Presented at a conference of the Electric Power Research Institute, Milwaukee, Wisconsin. May 2-4, 1990.

formulas can be modified to reflect effects from shared costs and savings (accruing to utilities and participants).

Many utilities currently use a two-step approach to evaluating conservation and DSM. First, they use the TRC test, reflecting direct utility and participant costs and shared savings, for integrated resource planning. Second, they use the RIM test and PCT to design successful programs, which motivate customer participation and fairly distribute conservation's benefits and costs. This approach offers a consistency of criteria and clarity of method, both of which aid decision making and implementation.



Overview of Portfolio Analysis

Historically, energy-efficiency procurement investment decisions have been made on a measure-by-measure basis. Detailed, engineering-based assessments of technologies and their associated costs and energy savings have formed the basis for defining DSM resource acquisition programs. Cost-effectiveness analyses have been conducted for individual measures, with programs then developed using bundles of cost-effective measures.

Increasingly, DSM professionals recognize the importance of developing a portfolio strategy, not only for designing individual programs, but for evaluating a mix of DSM programs. Mirroring the financial industry's portfolio theory, the energy-efficiency industry recognizes the value in assessing programs' diversification benefits. This portfolio approach to energy-efficiency program design and assessment includes defining and estimating risks at each DSM level: measures, programs, and bundles of programmatic initiatives. Using a portfolio approach for decision making and analysis offers several advantages.

First, this approach improves resource procurement decisions. Most energy-efficiency programs combine multiple measures to form a program. If each measure included in the program must be deemed cost-effective on its own, this ignores the diversification benefits and economies of joint delivery from bundled programs. A portfolio approach analyzes combinations of measures to determine the most cost-effective program design.

This may lead to the procurement of greater energy-efficiency resources than otherwise would have occurred. An additional (and perhaps more important) advantage offered by the portfolio approach arises from its help in quantifying and managing the potential risks of DSM resources. Such risks can be categorized into supply-side and demand-side risks. The supply-side includes: technical (e.g., measure quality and reliability); behavioral (e.g., persistence of savings); and market risks (e.g., market penetration). The demand-side risks principally result from uncertainty concerning future avoided costs.

Energy-efficiency projects, especially those with projected savings linked to the utility's resource planning requirements, carry substantial uncertainty risks regarding the determination of actual savings, and the persistence of the savings over the expected life of the conservation measure. These risks constitute a significant barrier to large-scale investments in such projects. Performance risks from energy-efficiency measures may originate from multiple sources, including measure failures, malfunctions, removals by customers, and degradations in quality.

Laboratory analyses of technological performance rely on assumptions of maximum useful life for conservation measures. Generally, physical life in the field differs from performance in a laboratory. Unfortunately, measure life estimates, based on laboratory results or optimum field conditions, do not account for real-life variables such as: installations, operations, and maintenance practices employed at sites where the conservation measures have been installed. Similarly, estimates not factoring in the effects that remodeling, renovation, and business turnover can have on a conservation measure's life

expectancy may prove inaccurate.⁴ Although enhanced measurement and verification procedures have significantly improved program designers' ability to determine energy savings of various conservation measures more accurately, evaluations of conservation programs have shown actual conservation measures' impacts sometimes fell short of design expectations. Technology assessments can help identify DSM program candidates by determining the technologies in appropriate applications that will enhance customer value. Such assessments can be research or applications oriented.⁵

In evaluating conservation risks, calculations must also account for supply-side uncertainties, as these relate to calculations of avoided costs, especially when using future price curves to evaluate conservation.⁶ Clearly, fluctuations in avoided costs directly affect the expected future value of conservation resources. However, the direction of these impacts depends on expectations of future market price movements. When market prices rise above forecast levels, the value of conservation resources increases. Conversely, lower future market prices diminish the value of conservation investments.

⁴ Skumatz, L. and C. Hickman. "Measure Life Study: The Effect of Commercial Building Changes on Energy Using Equipment." Proceedings of ACEEE Summer Study on Energy Efficiency in Buildings, Vol. 3:3.281-3.292. 1992.

⁵ Several useful recommendations have been offered for improving measure performance in conservation programs. For example, see: "Practical Integrated Resource Planning with Demand-Side Planning and Management: A Good Cents Position Paper," Good Cents Solutions, Stone Mountain, GA, 2004.

⁶ On the supply side, many utilities consider some or most of at least six risk types: capital risks, production tax credit risks, fuel price exposure, CO₂ tax exposure, market exposure, and load uncertainty.



Overview of the Model

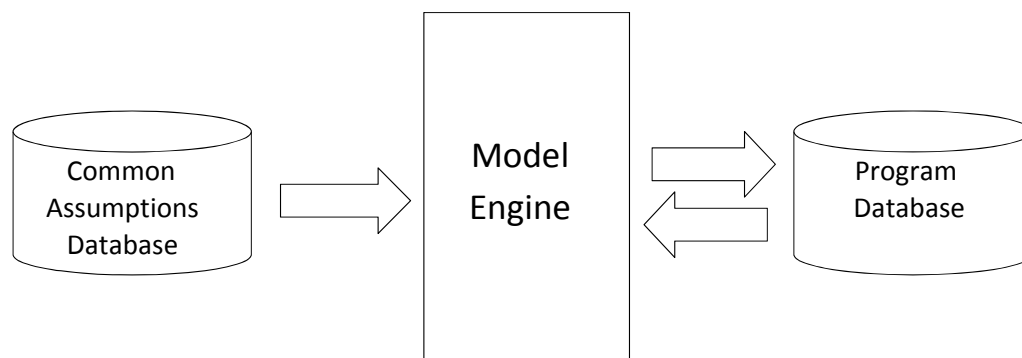
DSM Portfolio Pro uses Microsoft Excel as the basis for a DSM program analysis and scenario tool. Users begin analysis by entering measure information, such as measure costs, rebates, measure life, and annual energy savings. DSM Portfolio Pro allows users to combine measures into programs and programs into portfolios (such as residential or commercial), and to assess their outcomes under alternative assumptions. Cost-effectiveness results can be obtained for each measure, program, or portfolio of programs, and scenarios can be run using varying avoided cost and measure savings assumptions. To create the maximum resolution for DSM impacts, DSM Portfolio Pro's structure accepts data at the 8760 hourly level. Computer system requirements for DSM Portfolio Pro include Microsoft Excel 2007 or higher and Windows XP.

DSM Portfolio Pro's capabilities have been designed with a focus on:

- Creating a transparent and flexible tool for DSM planners and program designers.
- Providing standard calculations and algorithms for analyzing DSM results, including energy impacts, capacity impacts, and environmental benefits.
- Allowing users to analyze DSM outcomes easily under different scenarios.
- Providing a means for easy tracking and standard internal and external reporting of DSM performance.
- Allowing comprehensive assessment of DSM results and cost-effectiveness from multiple perspectives, following the California Standard Practice Manual protocols.

DSM Portfolio Pro consists of three workbooks: a model engine, containing all cost-effectiveness calculations; and two external workbooks. The common assumptions database (CAD) contains all utility-level details, such as the discount rate, avoided energy and capacity costs, energy savings curves, and retail rates. Figure 1 illustrates the relationship between the model engine and the external workbooks.

Figure 1. High-Level Model Overview



Major Functions of the Model

Build Program and View Results

Each program contains one or more measures that share common assumptions (e.g., inflation, discount rates, retail rates, line losses). When the user builds a program, they must specify the costs, customer sector, and the program start and end years (years in which measures will be installed).

Users must enter details for measures that define the program. For each measure, this includes: the number of measures installed each year; annual rebates and measure costs per installation; annual energy savings; and measure lifetime. Once the program has been built, users save the program inputs to the program database and can view the outputs.

Build Portfolio and View Results

A combination of programs makes up each portfolio. If users choose to develop a new portfolio, an input form appears, providing a list of available programs from the program database. Users then select programs to add to the portfolio. Finally, they select the primary sector for the portfolio, allowing use of the proper retail rates for the PCT and RIM tests. Portfolio costs and benefits are calculated at the measure level, by program. Users then save the portfolio to the program database and view the outputs.

Run and/or Save Scenario Analysis

When choosing to run a scenario, users must select which program or portfolio to use as the base, and then choose a multiplier on any (or all) five variables:

1. Avoided energy costs.
2. Avoided generation costs.
3. Measure life.
4. Electric energy savings.
5. Incremental measure costs.

Common Assumptions Database

The CAD stores utility and regional data in datasets common to all programs, including: energy savings curves, avoided costs, on/off peak and season definitions, inflation, retail rates, and discount rates. If the user does not populate the CAD, the model will not work correctly.

Program Database

The program database stores all inputs needed to run a cost-effectiveness analysis for a program, including: measure details, program costs, and economic assumptions. Each sheet in the file contains the inputs for a unique program or portfolio. When a user creates or edits a program and saves it, details are saved to this database so they can be recalled quickly at a later time. Users do not need to



manually modify the program database; by clicking the save button, modifications occur through the model engine interface.

Setting Up the Common Assumptions Database

DSM Portfolio Pro's CAD stores utility and regional data that do not vary by program, such as: energy savings curves, avoided costs, on-peak, off-peak, and season definitions, inflation, and escalators. The CAD must be populated before any programs can be built and analyzed, and should be fully updated annually to record changes in avoided cost expectations and annual load expectations. The same CAD should be used across all program evaluations.

Basic Inputs

Table 2 outlines basic data required in the CAD on the *Basic_Data* sheet, and denotes how each variable will be used.

Table 2. Basic Utility Inputs

| Variable | Cell Range | What | How Used | Input Terms |
|---------------------------|------------|---|---|--------------------|
| First Year | B4:C4 | First year of analysis for the model. Once set for the utility, this should not be changed, as previous input databases will not be compatible. | Defines first available year for all other data input. | Numeric |
| Sectors | B18:B22 | Defines the customer sectors. | Differentiates between program and measure types. | Text |
| Discount Rate | B5:C5 | Company's cost of capital. | Deflates streams of future costs and benefits. | Annual Percent (%) |
| Rate Escalator | B6:C6 | Allows future rates to be escalated linearly by a fixed annual percent. | Modifies future retail rates used to calculate customer bill savings and lost revenues. | Annual Percent (%) |
| Inflation Rate (T&D) | B7:C7 | Estimate of annual expected inflation. | Used as default figure to inflate future T&D cost streams. | Annual Percent (%) |
| Electric Retail Rates | C18:C22 | Customer retail rates, by sector, per kWh. | Used to calculate bills savings for PCT benefits and lost revenues for RIM costs. | \$/kWh |
| Gas Retail Rates | D16:D22 | Customer retail rates/gas avoided costs, by sector, per Therm. | Used to calculate TRC and SCT gas benefits. | \$/Therm |
| Environmental Adder | B11:C11 | Additional benefit (if any) placed by regulators on DSM projects. | Percent is applied to TRC benefits and added on to SCT benefits. | Annual Percent (%) |
| Line Loss | B8:C9 | Estimate of average line losses from generation to building end use. Different line losses are specified for energy and demand. | This percentage is added to on-site energy savings to account for additional energy that must be generated to account for losses. | Annual Percent (%) |
| T&D Avoided Capacity Cost | B10:C10 | Average cost of T&D capacity in dollars per MW. | Used to calculate T&D capacity benefits. | \$/MW |



| Variable | Cell Range | What | How Used | Input Terms |
|----------------------|------------|----------------------------------|---|-------------|
| Absolute System Peak | B29:C29 | Hour of the year of system peak. | Used to calculate peak hour demand savings. | Numeric |

Using daily and seasonal periods, the program calculates the average energy (kWh) and demand (kW) saved during the analysis period, as shown in Table 3.

Table 3. Daily and Seasonal Inputs

| Time-of-Use Information | Range | Definition |
|-------------------------|--------|--|
| Daily Periods | G4:K27 | Define summer and winter on-peak and off-peak hours by hour and day type (weekend, weekday). |
| Seasonal Periods | L4:M15 | Specify seasons (winter and summer) by month. |

The next section defines the cost categories and names of cost types (these costs are in addition to the per-unit measure and installation costs input as measure-specific information). These relate to the ongoing costs of maintaining the program.

Table 4. Cost Types

| Costs | Range | Definition |
|------------|--------|---|
| Cost Types | O4:O15 | Define cost categories for non-measure program costs. |

The energy savings curves allow a measure to be defined from within the program wizard. It populates a pull-down menu.

Table 5. Energy Savings Curves

| Measure Options | Range | Definition |
|---------------------------------|---------|---|
| Available Energy Savings Curves | R4:R100 | Defines the available energy savings curves for measures. |

Energy Savings Curves

The *EnergySavingsCurves* sheet stores energy savings curves, starting in cell I15. Columns A to H provide the day type, season, and daily period for each hour of the year. New energy savings curves should be added in the first blank column found to the right of Column I. When adding an energy savings curve, the name should be specified in row 12 (which should match a name in the energy savings curves list on the *Basic_Data* sheet). Users then fill in annual hourly data for the new energy savings curve in rows 15 through 8,774. Energy savings curve values should be entered as a percentage of the annual load, summing to one (1) across the 8,760 hours.

Avoided Energy Costs

The model can accept multiple years of hourly avoided energy cost data, entered as dollars per MWh. Hourly avoided cost values are stored in rows 15 through 8,774, beginning in column E of the *AvoidedEnergyCosts* sheet. The first year for avoided costs will be the same as the first year entered on

the *Basic_Data* sheet. Users should enter 30 years of hourly avoided costs; if they enter fewer than 30 years, the program will not estimate annual energy benefits for the missing years.

Avoided Capacity Costs

Avoided generation costs should be entered in row three of the *CapacityCosts* sheet, starting in Column B. Thirty years of costs should be entered; otherwise, annual capacity benefits will not be estimated for the missing years. Avoided T&D costs should be entered as a constant value, which does not escalate, on the *Basic_Data* sheet. To inflate future T&D costs with the inflation rate, enter a percent value in the *Inflation T&D* box of the *Assumptions* form. Failure to enter a percent value will result in avoided T&D costs remaining constant over time.

Avoided Energy Costs by Energy Savings Curve

The *AC_EndUses* sheet shows the average annual avoided cost, weighted by the energy savings curves. The rows in the sheet show each energy savings curve name from the *EnergySavingsCurves* sheet; columns show the years. The values represent the average avoided cost for the year, with the hourly avoided costs weighted by the hourly energy savings curves.

Column AG shows the percentage of load occurring in the system peak hour for each energy savings curve. Columns AH and AI show the average percentage load for all hours considered summer on-peak or winter on-peak, respectively. Columns AJ and AK show the total percentage of load occurring in the summer on-peak and winter on-peak hours, respectively.



Opening Portfolio Pro

Upon opening the model, users must enable macros by clicking on the security options button appearing in the upper left corner of the Excel window, near the formula bar (Excel 2007). The user interface will not function without macros enabled.

The form in Figure 2 then appears. This allows the user to open the desired database files, add new files, or delete files from the list. CAD and program database files must be saved in the same directory, entered in the *File Path* box. The file path automatically defaults to the directory where the program saves the model. If users choose to save CAD and program database files in another directory, they must update the file path. If the desired CAD or program database files do not appear in the white boxes, users should click the *Add New* buttons under the white boxes. An additional dialog box opens, and the user enters the exact file name in that box. If a program database file does not exist, users should type a file name, and the model will create the file.

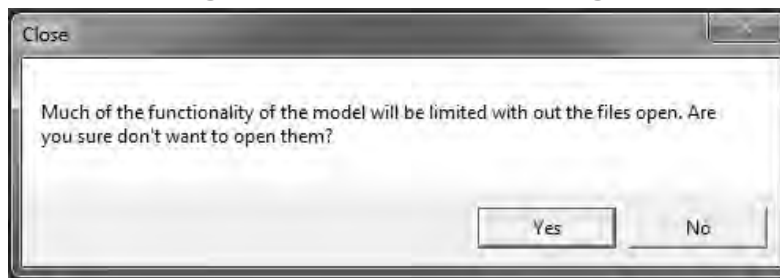
To open the database files, users select the desired CAD and program database files from the white boxes, and click the *Done* button. If the file names selected exist in the file path provided, the two supporting files open in the background, and the model's *Dashboard* sheet appears.

Figure 2. Open Model Files Form

The image shows a dialog box titled "Model Files". It is divided into two main sections. The left section is titled "Please Select the Active CAD:" and contains a list box with "Reno_CAD_April2013.xlsx" and a large empty white box below it. Below the white box are two buttons: "Add New" and "Delete From List". The right section is titled "Please Select the Active Program Database:" and contains a list box with "PD_Reno_April2013.xlsx" and a large empty white box below it. Below the white box are two buttons: "Add New" and "Delete From List". At the bottom of the dialog, there is a "File Path:" label followed by a text box containing the path "\\Cadmusgroup.org\energy\quantec_models\PortfolioPro\Mod,". Below the text box are two buttons: "Cancel" and "Done".

If users click the *Cancel* button, the message shown in Figure 3 will appear.

Figure 3. Close Model Files Message



If users select *Yes*, the model opens, and the *Dashboard* page appears. However, since the supporting files do not open, users will only see spreadsheet cells, and will not be able to use the interface.

If users enter the file path or file names for the CAD and program database incorrectly, they receive an error dialog box, which explains the CAD could not be found. A program database file will be created with the given file path and name. At that point, users must click the *Open Database Files* button on the Dashboard to correct the file paths and file names.

Note that to ensure the model operates efficiently, the calculation settings default to manual. When running the model through the user interface, calculations refresh programmatically. However, if users conduct separate calculations within the spreadsheet, they will have to refresh calculations manually to receive accurate results.

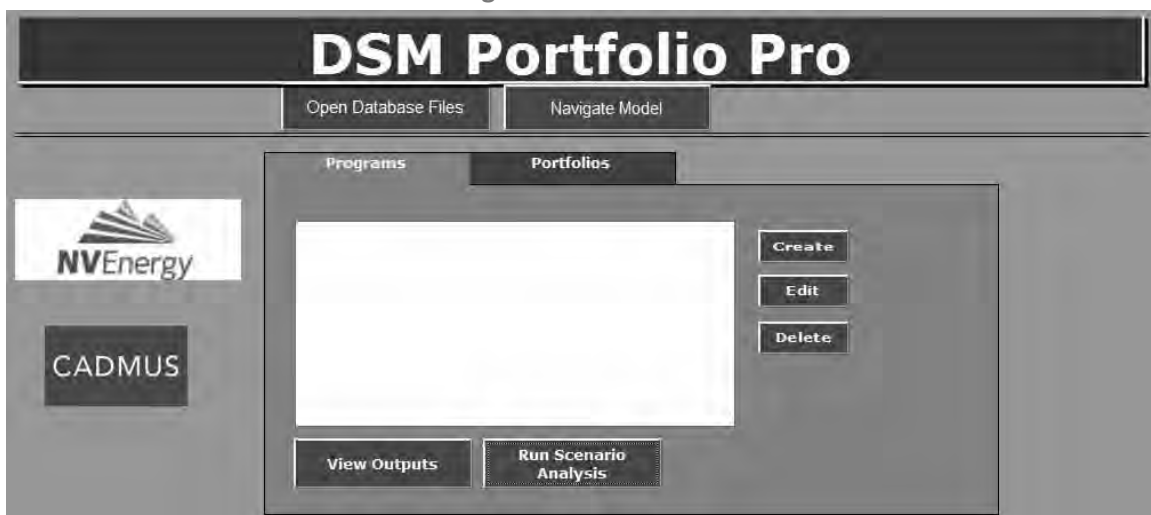


Dashboard Layout

The Dashboard allows users to navigate to all other sheets in the model and operate the model's functions. This section outlines the layout and purpose of options shown on the Dashboard page.

- A) **Open Database Files Button.** Pressing this button opens the form shown in Figure 4, which allows users to open the data files that support DSM Portfolio Pro (CAD, program database).
- B) **Navigate Model Button.** Pressing this button opens a form that allows the user to navigate to other sheets in the model.
- C) **Create Button.** Pressing this button opens a form that allows users to enter information for a new program or portfolio.
- D) **Edit Button.** Pressing this button opens a form that allows users to edit information for an existing program or portfolio that previously has been set up in the model and is stored in the program database.
- E) **Delete Button.** Pressing this button allows users to delete an existing program or portfolio, removing it from the program database.
- F) **View Outputs Button.** Pressing this button allows users to view the cost-effectiveness results for an existing program or portfolio without having to tab through the input forms.
- G) **Run Scenario Analysis Button.** Pressing this button allows users to run scenarios on a previously existing program or portfolio.

Figure 4. Dashboard



Building a Program

1. Open Database Files

Press the *Open Database Files* button on the Dashboard, and select the desired CAD and program database files after updating the file path and file names, if necessary.

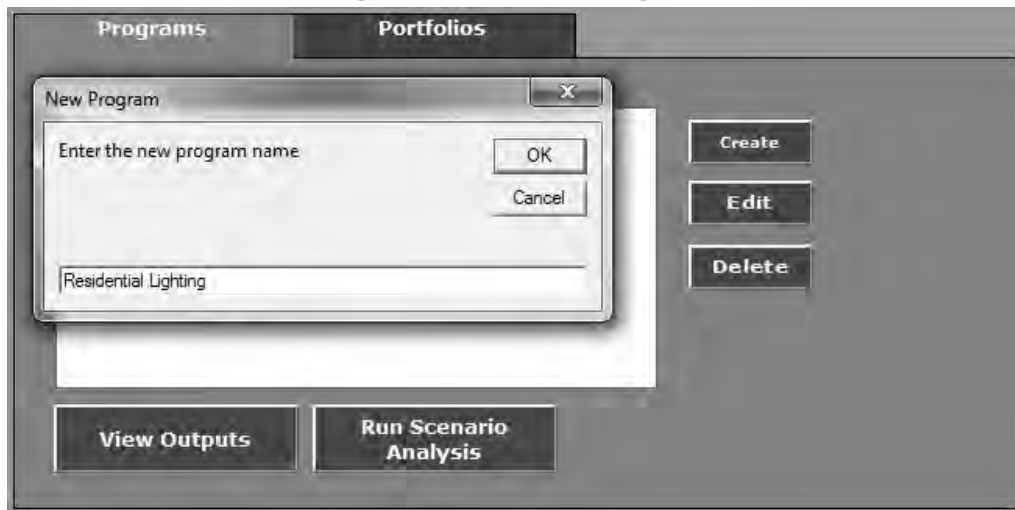
2. Create New Program

Select the Programs tab on the Dashboard (see Figure 4) and click the *Create* button.

3. Name the Program

In the form that appears (shown in Figure 5), provide a name for the new program and press *OK*. Note that program names must be less than 31 characters.

Figure 5. Create New Program



Form 1 of 5: Basic Program Information

Figure 6. Basic Program Information Form

The screenshot shows a software window titled 'Program Information' with a close button (X) in the top right corner. Inside the window, the title 'Residential Lighting' is centered at the top. Below the title, the section 'Basic Program Information' is displayed. On the left side of the form, there is a vertical stack of five buttons: 'Basic Program Information' (which is highlighted), 'Assumptions', 'Costs', 'Measures', and 'Program Notes'. The main area of the form contains several input fields: 'Program Name' with the text 'Residential Lighting', 'Customer Sector' with a dropdown menu showing '- Please Choose a Sector -', 'Region' with a dropdown menu showing 'Reno', 'Start Year' with an empty text box, 'End Year' with an empty text box, 'Per Unit Demand Reduction' with an empty text box, and 'Year Dollars entered' with an empty text box. At the bottom of the form, there are three buttons: 'Cancel', 'View Outputs', and 'Save'.

4. Choose Sector

Choose a customer sector for the program; this will define the retail rate used for the participant and RIM tests.

5. Choose Start Year and End Year

Choose the start year and end year for the program (i.e., the years for which measures will be installed). The program uses measure life to calculate the full benefits of installed measures. By default, the *Year Dollars Entered* box will be populated with the start year. This field will be the year to which results are discounted. Although it defaults to the start year, users can manually override this with a different year.

6. Input Demand Reduction

Users should input demand reduction (kW per unit installed) only if the model does not correctly estimate the demand savings, based on energy savings curves and kWh energy savings (e.g., a demand response program). Note: this only works for programs and not for portfolios.

Form 2 of 5: Assumptions

Figure 7. Basic Assumptions Form

Program Information

Residential Lighting

Basic Assumptions

| | |
|-----------------------|-----------|
| Discount Rate | 7.86% |
| Retail Rate Escalator | 1.65% |
| Inflation (T&D) | 2.72% |
| Line Loss - Energy | 6.3% |
| Line Loss - Demand | 12.0% |
| Electric Retail Rate | |
| Gas Retail Rate | |
| Avoided Capacity Cost | \$11876.0 |
| Environmental Adder | 10.0% |

Cancel View Outputs Save

7. Edit Utility Assumptions from Basic Data

Any changes made to the basic data on this form will only be saved within the program, and will not overwrite the values in the CAD. Once the program has been developed, the basic data saved with a program will not update with changes made to the basic data in the CAD.

Form 3 of 5: Costs

Figure 8. Program Cost Data Form

The screenshot shows a software window titled "Program Information" with a sub-header "Residential Lighting". Below this is the "Program Cost Data" section. On the left is a vertical sidebar with five buttons: "Basic Program Information", "Assumptions", "Costs" (which is highlighted), "Measures", and "Program Notes". The main area contains a table for "Annual Cost" with four rows: "Utility Admin & M&V", "Implementation Costs", "Incentives", and "Miscellaneous". Each row has a text input field, followed by the text "OR", and then a button labeled "Enter Yearly Data". At the bottom of the window are three buttons: "Cancel", "View Outputs", and "Save".

| Annual Cost | |
|----------------------|--|
| Utility Admin & M&V | <input type="text"/> OR <input type="button" value="Enter Yearly Data"/> |
| Implementation Costs | <input type="text"/> OR <input type="button" value="Enter Yearly Data"/> |
| Incentives | <input type="text"/> OR <input type="button" value="Enter Yearly Data"/> |
| Miscellaneous | <input type="text"/> OR <input type="button" value="Enter Yearly Data"/> |

8. Enter Program Costs

All program cost inputs offer two data input options:

1. *Constant value.* The value entered in the annual cost box equals the value for all program years.
2. *Nominal values for all installation years.* After clicking the *Enter Yearly Data* button to the right of the *Annual Cost* box, users can enter annual monetary values in the new form that appears, shown in Figure 9.

Figure 9. Enter Yearly Data Form

The screenshot shows a software window titled "Enter Yearly Data". It contains a table with four columns representing the years 2012, 2013, 2014, and 2015. Each column has a text input field. The values entered in the fields are 10000, 12000, 14000, and 16000 respectively. At the bottom of the window are two buttons: "Cancel" and "Done".

| 2012 | 2013 | 2014 | 2015 |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <input type="text" value="10000"/> | <input type="text" value="12000"/> | <input type="text" value="14000"/> | <input type="text" value="16000"/> |

Form 4 of 5: Measures

Figure 10. Program Measures Form

The screenshot shows a software window titled "Program Information" with a close button (X) in the top right corner. The main title "Residential Lighting" is centered at the top. Below it, the section "Program Measures" is displayed. On the left side, there is a vertical stack of five buttons: "Basic Program Information", "Assumptions", "Costs", "Measures", and "Program Notes". The "Measures" button is currently selected. The central area of the window is a large white box with the header "Measures Used". To the right of this box, there are three buttons: "Add New Measure", "Remove Measure", and "Measure Details". At the bottom of the window, there are three buttons: "Cancel", "View Outputs", and "Save".

9. Add Measure(s) to the Program

To add a measure to the program, click the *Add New Measure* button. A form will appear, allowing users to enter the name of the measure. After entering the measure name and clicking the *OK* button, the form shown in Figure 11 appears. Once measures have been added to the program, their names appear in the white box under the *Measures Used* header, shown in Figure 10.



Figure 11. Add New Measure Form

Residential Lighting
Measure Details for: 23W CFL

Basic Measure Data

Measure Name:

Measure Lifetime:

Annual Electric Savings: kWh

Annual Gas Savings: Therms

Secondary Benefits: \$/Measure

Energy Savings Curve:

Annual Degradation: Annual %

Drop Out Rate: Annual %

NTG Ratio: Annual %

Annual Number of Units Installed

| 2012 | 2013 | 2014 | 2015 |
|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Incremental Measure Cost Per Unit (\$/Unit)

| 2012 | 2013 | 2014 | 2015 |
|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Rebate Per Unit (\$/Unit)

| 2012 | 2013 | 2014 | 2015 |
|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

10. Enter Measure Details

Enter the measure lifetime, annual energy savings, annual degradation (how much savings have been lost each year), net-to-gross (NTG) ratio, and drop-out rate (the percentage of participants uninstalling the measure). Assign the measure an energy savings curve by picking from the provided drop-down list. Enter non-energy benefits by selecting *Other* from the *Secondary Benefits* drop-down list, and entering the value in dollars per unit installed. Then enter the annual number of units installed, the incremental measure cost per unit, and the rebate dollars per unit in the boxes provided. After all details have been entered, click the *Done* button.

11. Delete a Measure

To remove a measure from a program, highlight the measure name in the *Measures Used* box, and click the *Remove Measure* button. The measure name will no longer appear in the white box.

12. View or Edit Measure Details

To view or edit the details for a measure already saved to the program, highlight the measure name in the *Measures Used* box, and click the *Measure Details* button. The form shown in Figure 11 will appear, except it will be populated with the previously entered information.

Form 5 of 5: Program Notes**13. Add Notes for Reference**

Notes regarding a program can be added for ease of reference, and will be reflected in the program database as well as in the *Results* sheet.

Program Form—Save and View Outputs**14. Save Program and View Outputs**

Once the user has completed entering and reviewing the program and measure inputs, the program should be saved to the program database, and results can be viewed:

- *Save*: Saves the program inputs to the program database for future editing/scenarios.
- *View Outputs*: Runs cost-effectiveness analysis and displays the *Results* sheet.



Cost-Effectiveness Results

DSM Portfolio Pro provides three levels of results for all programs and portfolios. The *Results* sheet provides an aggregate summary of the present value of costs and benefits for each of the five primary cost-effectiveness tests, along with benefit-cost ratios. The *Program_Calculations* sheet provides the annual values for the individual components of the cost-effectiveness tests, aggregated at the program level. Finally, the *Measure_Calculations* sheet provides the annual values for the individual components of the cost-effectiveness tests at the measure level.

Results

The *Results* sheet provides the program's cost-effectiveness, based on the present value of program costs and benefits (see Figure 12). This shows the benefit-cost ratios for the five cost-effectiveness tests listed in the Standard Practice Manual (with two TRC versions provided: one including rebates paid to freeriders as a cost, and one that does not) as well as: the total present value of costs and benefits; the net benefits; and the cost of conserved energy. This information shows users the perspectives from which the program or portfolio can be considered cost-effective.

In addition, the *Results* sheet reports total utility savings and costs for the first three years of the program or portfolio as well as total project savings and costs. This includes the total utility investment, net energy benefits, and energy and demand savings.

Figure 12. Results Sheet

| | | | |
|-------------------------|----------------------|------------------------------|-----------------------------|
| Name: | Residential Lighting | Last Updated: | 5/9/2013 10:30 |
| Customer Sector: | 0 | Avg Measure Life: | 12.00 |
| Region : | Reno | Energy Savings Curve: | Residential_Lighting |
| Start Year: | 2012 | Model File Name: | DSM_PortPro_April2013.xlsm |
| End Year: | 2015 | CAD File Name: | Reno_CAD_April2013.xlsx.xls |
| Notes: | | Program DB Name: | PD_Reno_April2013.xlsx |

| Stakeholder Perspectives & Tests | Benefits (PV) | Costs (PV) | Net Benefits (PV) | B/C Ratio | Cost of Conserved Energy (\$/kWh) |
|---|----------------------|-------------------|--------------------------|------------------|--|
| Total Resource Cost (TRC) | \$324,785 | \$144,096 | \$180,690 | 2.25 | \$0.021 |
| Total Resource Cost (TRC) - Adjusted* | \$324,785 | \$144,096 | \$180,690 | 2.25 | \$0.021 |
| Utility Cost Test (UCT) | \$324,785 | \$139,126 | \$185,660 | 2.33 | \$0.020 |
| Participant Cost Test (PCT) | \$42,368 | \$7,918 | \$34,450 | 5.35 | \$0.001 |
| Ratepayer Impact (RIM) | \$324,785 | \$139,126 | \$185,660 | 2.33 | \$0.020 |
| Societal Cost (SCT) | \$354,348 | \$144,096 | \$210,253 | 2.46 | \$0.021 |

*Includes rebates paid to free riders

| Utility Savings & Costs* | 2012 | 2013 | 2014 | Total Project |
|--------------------------------------|-------------|-------------|-------------|----------------------|
| Total Utility Investment (\$) | \$38,100 | \$39,100 | \$39,200 | \$155,400 |
| Electric Benefits (\$) | \$1,986 | \$20,872 | \$22,055 | \$324,785 |
| Gas Benefits (\$) | \$0 | \$0 | \$0 | \$0 |
| Incremental Energy & Demand Savings: | | | | |
| Electric Savings (kWh) | 53,362 | 586,980 | 640,342 | 10,374,877 |
| Critical Peak Hour Demand (kW) | 5 | 54 | 59 | 141 |
| Gas Savings (therms) | 0 | 0 | 0 | 0 |
| Total On Peak Hours (kWh) | 1,644 | 18,082 | 19,726 | 2,360,963 |
| Total On Peak Hours (%) | | | | 23% |

*Savings in this section are adjusted for line loss and net-to-gross


| Financial Data | | Secondary Benefits | |
|--------------------------------|----------|---------------------------|------|
| Discount Rate: | 7.86% | Other Savings | \$0 |
| Rate Escalator: | 1.65% | | |
| Inflation Rate (T&D): | 2.72% | Scenarios: | |
| Line Loss (Energy): | 6.30% | Measure Life | 100% |
| Line Loss (Demand): | 12.00% | Energy Savings | 100% |
| Avoided T&D Capacity \$/MW: | \$11,876 | Avoided Energy Cost | 100% |
| Environmental Adder (SCT only) | 10.00% | Avoided Capacity Cost | 100% |
| Electric Retail Rate (\$/KWh): | \$0.00 | Incremental Measure Cost | 100% |
| Gas Retail Rate (\$/therm) | \$0.00 | | |
| Net-To-Gross Ratio | 100.0% | | |

Program Calculations

This sheet shows the program or portfolio annual costs, benefits, and savings used to calculate benefit-cost ratios for each of the five perspectives. It includes how costs are incurred and benefits accrued over time, for up to 30 years from the program's inception.

The many series of annual data reported include:

- TRC costs and benefits.
- UCT costs and benefits.
- PCT costs and benefits.
- RIM costs and benefits.
- SCT costs and benefits.
- Utility administrative, measure rebate, and program incentive costs.
- Gross and net participant measure costs.
- Net annual savings in KWh and in dollars.
- Net capacity savings in KW and in dollars.

- 
- Seasonal peak energy savings.
 - Incremental energy and demand savings.

Measure Calculations

This sheet reports annual costs, benefits, and savings for each measure in the program or portfolio. It allows for comparisons of the costs and benefits of each measure over time, up to 30 years from the program's inception.

The many series of annual measure data reported include:

- Inputs such as: annual savings per unit, energy savings curve, measure life, NTG ratio, and other benefits savings per unit.
- Cumulative installations.
- Net annual energy savings in KWh and Therms.
- Net annual demand savings in KW.
- Annual energy and demand benefits in dollars.
- Seasonal peak energy and demand savings.
- Utility measure costs (incentives).
- Gross and net participant measure costs.
- Transfer incentive recapture quantity (proportion of incentives paid to freeriders, recaptured for TRC).
- Incremental energy and demand savings.

Building a Portfolio

A portfolio consists of a combination of programs to be analyzed together, per the following steps.

1. Open Database Files

Press the *Open Database Files* button on the Dashboard, and select the desired CAD and program database after updating the file path and file names, if necessary.

2. Add New Portfolio

Select the Portfolios tab on the Dashboard (shown in Figure 4), and click the *Create* button to the right of the white box.

3. Name the Portfolio

In the form that appears, provide a name for the new portfolio and press *OK*. Portfolio names must be less than 31 characters.

Figure 13. Basic Portfolio Information Form

The screenshot shows the 'Portfolio Builder' window with the 'Residential' tab selected. On the left, there are three buttons: 'Basic Portfolio Information' (highlighted), 'Assumptions', and 'Programs'. The main area is titled 'Basic Portfolio Information' and contains three input fields: 'Portfolio Name' with the value 'Residential', 'Primary Sector' with a dropdown menu showing '- Please Choose a Sector -', and 'Primary Region' with a dropdown menu showing 'None'. At the bottom, there are three buttons: 'Cancel', 'View Outputs', and 'Save'.

4. Choose Portfolio Sector

Select a sector from the drop-down list. This establishes the retail rate used in determining the portfolio's participant benefits and RIM costs. Though programs from multiple sectors can be combined into a portfolio, only one sector can be assigned to the portfolio. Combining multiple sectors into one portfolio may result in incorrect retail rates being applied to some programs.

Figure 14. Portfolio Basic Assumptions Form

The screenshot shows the 'Portfolio Builder' window with the 'Residential' tab selected. On the left, there are three buttons: 'Basic Portfolio Information', 'Assumptions' (highlighted), and 'Programs'. The main area is titled 'Basic Assumptions' and contains a table of input fields with their respective values. At the bottom, there are three buttons: 'Cancel', 'View Outputs', and 'Save'.

| | |
|-----------------------|-----------|
| Discount Rate | 7.86% |
| Retail Rate Escalator | 1.65% |
| Inflation (T&D) | 2.72% |
| Line Loss - Energy | 6.3% |
| Line Loss - Demand | 12.0% |
| Electric Retail Rate | \$0.1 |
| Gas Retail Rate | \$0.67 |
| Avoided Capacity Cost | \$11876.0 |
| Environmental Adder | 10.0% |
| Year dollars | |



5. Edit Assumptions

Utility assumptions can be changed for the overall portfolio. As with a program, changes made to basic data are saved only within the portfolio, and do not overwrite the values in the CAD, nor are portfolio assumptions updated when updating the CAD.

Figure 15. Add Programs to Portfolio Form



6. Add Programs to the Portfolio

Programs can be added to the portfolio by highlighting the program in the *Available Programs* box, and clicking on the arrow (>) shown in Figure 15.

7. Save Portfolio and View Outputs

The finished portfolio should be saved to the program database, and results can be viewed:

- *Save*: Saves program inputs for each program added to the portfolio to the program database for future editing/scenarios.
- *View Outputs*: Runs cost-effectiveness analysis and displays the output page.

Editing a Program or Portfolio

1. Open Database Files

If database files have not been opened, or if file names or the file path have changed on the Dashboard, click the *Open Database Files* button, and open the appropriate CAD and program database files.

2. Choose Program or Portfolio

Click the Program or Portfolio tab on the Dashboard.

3. Edit Program or Portfolio

Click the program or portfolio name that requires editing, and click the *Edit* button.

4. Make Changes

The forms used in previous sections of this user manual under “Building a Program” and “Building a Portfolio” will appear, with the previously entered program data populating the data entry boxes. Edit the program or portfolio as desired, then save it and view the outputs. If the user chooses to change the program and save it as a new program, this can be done by using the form shown in Figure 5, and typing a new name in the *Program Name* box.



Running a Scenario

1. Open Database Files

If database files have not been opened or if the file names or file paths have changed on the Dashboard, click the *Open Database Files* button.

2. Choose Program or Portfolio

Click the Program or Portfolio tab on the Dashboard.

3. Choose Program or Portfolio for Scenarios

Choose a program or portfolio, and click the *Run Scenario Analysis* button under the white box. In the form that appears, shown in Figure 16, enter a name for the scenario to differentiate base case results from scenario results (scenario inputs appear on the *Results* sheet).

Figure 16. Scenario Options Form

| | multiplier on original value |
|--------------------------|------------------------------|
| Avoided Energy Costs | 100% |
| Avoided Generation Costs | 100% |
| Measure Life | 50% |
| Electric Energy Savings | 100% |
| Incremental Measure Cost | 100% |

Buttons: Cancel, Recalculate

4. Choose and Change Variables for a Scenario

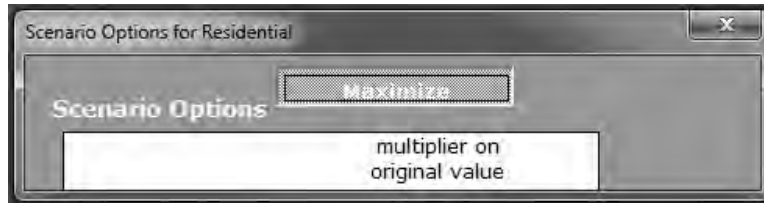
The input values (multipliers) for avoided energy costs, avoided generation costs, measure life, electric energy savings, and incremental measure costs will be multiplied by the original assumptions. For example, to run a scenario assuming 50% of the measure life, input 0.5 in the *Measure Life* box.

5. View Scenario Outputs

Viewing the outputs allows the user to see scenario results without saving the inputs. Clicking the *Recalculate* button updates the *Results* sheet to show the new cost-effectiveness results. However, the scenario builder will remain open in a minimized form (Figure 17). Clicking

Maximize again shows the entire form, and users can make changes to the scenario. Clicking *Cancel* returns users to the Dashboard.

Figure 17. Minimized Scenario Form





Calculations

DSM Portfolio Pro calculations have been based upon the 1987 California Standard Practice Manual. The TRC ratio reflects the revisions to TRC in the 2007 Clarification Memo from the California Public Utility Commission (CPUC).

Definitions

- y = calculation year
- h = hour
- life = measure life
- m = individual measures
- M = total measures in program
- p = program
- t = total over calculation horizon (30 years)
- SummerOn = summer on peak period
- SummerOnHours = total hours during summer on-peak period
- WinterOn = winter on peak period
- WinterOnHours = total hours during winter on-peak period
- C = customer class
- Peak = peak system hour(s)
- DR = demand reduction (kW) per unit of measure installed

Energy Benefits to Utility

- $CumulativeInstalls_y = NewInstalls_y + CumulativeInstalls_{y-1} * (1 - DropOut\% - Degradation\%) - NewInstalls_{y-life} * (1 - DropOut\% - Degradation\%)^{life}$
- $Gross\ Electric\ Energy\ Savings_{mh} = CumulativeInstalls_y * PerUnitkWhSavings * EnergySavingsCurve_h / (1 - LineLossEnergy\ \%)$
- $Net\ Electric\ Energy\ Savings_{mh} = Gross\ Electric\ Energy\ Savings_{mh} * NTG$
- $NetElectricEnergySavings_h = \sum_{m=1}^M NetElectricEnergySavings_{mh}$
- $NetElectricEnergySavings_y = \sum_{h=1}^{8760} NetElectricEnergySavings_h$
- $EnergyBenefit_h = NetElectricEnergySavings_h / 1000 * AvoidedEnergyCost_h$
- $EnergyBenefit_y = \sum_{h=1}^{8760} EnergyBenefit_h$
- $EnergyBenefit_t = EnergyBenefit_{y=1} + \sum_{y=2}^{30} \frac{EnergyBenefit_y}{(1 + DiscountRate)^y}$

Seasonal Energy Benefits to Utility

- $SumKWh_{m, SummerOn} = \sum_{h=1}^{SummerOnHours} EnergySavingsCurve_{mh}$
- $SumKWh_{m, WinterOn} = \sum_{h=1}^{WinterOnHours} EnergySavingsCurve_{mh}$
- $KWh_{m, SummerOn} = NetElectricEnergySavings_y * SumKWh_{m, SummerOn}$
- $KWh_{m, WinterOn} = NetElectricEnergySavings_y * SumKWh_{m, WinterOn}$

Capacity Benefits to Utility

- **Case 1: Use energy savings curve to determine peak hour savings**
 - $NetPeakDemandSavings_y = CumulativeInstalls_y * PerUnitkWhSavings * EnergySavingsCurve_{Peak} / (1 - LineLossDemand\%) * NTG$
- **Case 2: Use per unit demand reduction to determine peak hour savings**
 - $NetPeakDemandSavings_y = CumulativeInstalls_y * DR / (1 - LineLossDemand\%) * NTG$
- $GenerationCapacityBenefit_y = NetPeakDemandSavings_y / 1000 * AvoidedGenerationCapacityCost_y$
 $T \& DCapacityBenefit_y = NetPeakDemandSavings_y / 1000 * AvoidedT \& DCapacityCost_y$
 $CapacityBenefit_t = GenerationCapacityBenefit_{y=1} + T \& DCapacityBenefit_{y=1} +$
 $\sum_{y=2}^{30} \frac{GenerationCapacityBenefit_y + T \& DCapacityBenefit_y}{(1 + DiscountRate)^y}$

Seasonal Capacity Benefits to Utility

- $AvgKW_{y, SummerOn} = \sum_{h=1}^{SummerOnHours} EnergySavingsCurve_h \div SummerOnHours$
- $AvgKW_{y, WinterOn} = \sum_{h=1}^{WinterOnHours} EnergySavingsCurve_h \div WinterOnHours$
- $KW_{y, SummerOn} = CumulativeInstalls_y * PerUnitkWhSavings / (1 - LineLossDemand\%) * NTG * AvgKW_{y, SummerOn}$
- $KW_{y, WinterOn} = CumulativeInstalls_y * PerUnitkWhSavings / (1 - LineLossDemand\%) * NTG * AvgKW_{y, WinterOn}$

Bill Reductions and Lost Revenue

$$BillReduction_y = GrossElectricEnergySavings_y * (1 - LineLossEnergy\%) * retailRate_c$$

- $* \prod_{i=1}^y (1 + RetailRateEscalator_i)$



- $Bill\ Reduction_t = Bill\ Reduction_{y=1} + \sum_{y=2}^{30} \frac{Bill\ Reduction_y}{(1 + DiscountRate)^y}$
- $Lost\ Revenue_y = NetElectricEnergySavings_y * (1 - LineLossEnergy\%) * retailRate_c$
- $* \prod_{i=1}^y (1 + RetailRateEscalator_y)$
- $Lost\ Revenue_t = Lost\ Revenue_{y=1} + \sum_{y=2}^{30} \frac{Lost\ Revenue_y}{(1 + DiscountRate)^y}$

Other Benefits

- $NetGasSavings_m = Cumulative\ Installs_{y_m} * PerUnitThe\ rmSavings * NTG$
- $NetGasSavings_y = \sum_{m=1}^M NetGasSavings_m$
- $NetGasBenefits_y = NetGasSavings_y * GasRate\$_y$
- $NetGasBenefit_t = GasBenefit_{y=1} + \sum_{y=2}^{30} \frac{GasBenefit_y}{(1 + DiscountRate)^y}$
- $OtherBenefit_y = Cumulative\ Installs_y * OtherSavings\$_m * NTG$
- $OtherBenefit_t = OtherBenefit_{y=1} + \sum_{y=2}^{30} \frac{OtherBenefit_y}{(1 + DiscountRate)^y}$

Environmental Impacts

- $BenefitAvoidedEmissions_y = (EnergyBenefit_y + GasBenefit_y) * (EnvironmentalAdder\%)$
- $BenefitAvoidedEmissions_t = BenefitAvoidedEmissions_{y=1} + \sum_{y=2}^{30} \frac{BenefitAvoidedEmissions_y}{(1 + DiscountRate)^y}$

Participant and Utility Costs

- $ParticipantMeasureCost_y = \sum_{m=1}^M NewInstall s_{ym} * PerUnitMeasureCost_{ym}$
- $ParticipantMeasureCost_t = ParticipantMeasureCost_{y=1} + \sum_{y=2}^{30} \frac{ParticipantMeasureCost_y}{(1 + DiscountRate)^y}$
- $TRCMeasure\ Cost_y = \sum_{m=1}^M NewInstall s_{ym} * PerUnitMeasureCost_{ym} * NTG$

- $TRCMeasureCost_t = TRCMeasureCost_{y=1} + \sum_{y=2}^{30} \frac{TRCMeasureCost_y}{(1 + DiscountRate)^y}$
 - $UtilityMeasureIncentiveCost_y = \sum_{m=1}^M NewInstall s_{ym} * IncentiveAmount \$_{ym}$
 - $UtilityMeasureIncentiveCost_t = UtilityMeasureIncentiveCost_{y=1} + \sum_{y=2}^{30} \frac{UtilityMeasureIncentiveCost_y}{(1 + DiscountRate)^y}$
 $UtilityProgramIncentive_y = ProgramIncentive1_y + ProgramIncentive2_y + \dots + ProgramIncentiveN_y$
 - $UtilityProgramIncentive_t = UtilityProgramIncentive_{y=1} + \sum_{y=2}^{30} \frac{UtilityProgramIncentive_y}{(1 + DiscountRate)^y}$
 - $UtilityAdministrativeCost_y = ProgramCost1_y + ProgramCost2_y + \dots + ProgramCostN_y$
 - $UtilityAdministrativeCost_t = UtilityAdministrativeCost_{y=1} + \sum_{y=2}^{30} \frac{UtilityAdministrativeCost_y}{(1 + DiscountRate)^y}$
- $$TransferIncentiveRecaptureQuantity_y = \sum_{m=1}^M (1 - NTG) * NewInstall s_{ym} * IncentiveAmount \$_{ym}$$
- $$TransferIncentiveRecaptureQuantity_t = TransferIncentiveRecaptureQuantity_{y=1} + \sum_{y=2}^{30} \frac{TransferIncentiveRecaptureQuantity_y}{(1 + DiscountRate)^y}$$

Benefit/Cost Tests

- **Total Resource Cost Test**
 - $TotalResourceCost_t = TRCMeasureCost_t + UtilityAdministrativeCost_t + UtilityProgramIncentive_t + TransferIncentiveRecaptureQuantity_t$
 - $TotalResourceBenefit_t = EnergyBenefit_t + CapacityBenefit_t + GasBenefit_t$
- **Utility Cost Test**
 - $UtilityCost_t = UtilityAdministrativeCost_t + UtilityMeasureIncentiveCost_t + UtilityProgramIncentive_t$
 - $UtilityBenefit_t = EnergyBenefit_t + CapacityBenefit_t$
- **Participant Cost Test**
 - $ParticipantCost_t = ParticipantMeasureCost_t$
 - $ParticipantBenefit_t = BillReduction_t + UtilityMeasureIncentiveCost_t + UtilityProgramIncentive_t$
- **RIM Test**
 - $RIMCost_t = LostRevenue_t + UtilityAdministrativeCost_t + UtilityMeasureIncentiveCost_t + UtilityProgramIncentive_t$
 - $RIMBenefit_t = EnergyBenefit_t + CapacityBenefit_t$



- **Societal Test**

- $SocietalCost_t = TRCMeasureCost_t + UtilityAdministrativeCost_t + UtilityProgramIncentive_t + TransferIncentiveRecaptureQuantity_t$
- $SocietalBenefit_t = EnergyBenefit_t + CapacityBenefit_t + GasBenefit_t + OtherBenefit_t + BenefitAvoidedEmissions_t$

Other Calculations

The following calculations occur for each perspective: TRC, UCT, PCT, RIM, and SCT:

$$CostConservedEnergy_y = \frac{Costs_y}{Savings_y}$$

$$CostConservedEnergy_t = \sum_{y=1}^{30} \frac{Costs_y}{(1 + DiscountRate)^y} \div \sum_{y=1}^{30} \frac{ElectricEnergySavings_y}{(1 + DiscountRate)^y}$$