BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Joint Application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for approval of their 2027-2046 integrated resource plan, 2027-2029 Action Plan and 2027-2029 Energy Supply Plan.	Docket No. 26-05___

VOLUME 36 OF 41

TECHNICAL APPENDIX
DEMAND SIDE MANAGEMENT PLAN

DSM-11

In-Home and Online Energy Assessments
NV Energy
Program Year 2025

Measurement and Verification Report
March 17, 2026

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TABLE OF CONTENTS

1 EXECUTIVE SUMMARY

This Measurement and Verification ("M&V") report provides verified ex-post energy and demand impacts achieved by the Energy Assessments Program ("Program") that NV Energy offered Sierra Pacific Power Company and Nevada Power Company ("SPPC" and, collectively with "NPC," "NV Energy") customers during 2025. This M&V report is provided by the Evaluator, Qualus LLC (formerly ADM Associates Inc., which was acquired by Qualus LLC in July 2025), an independent, third-party contractor that provides evaluation and M&V services and reports for numerous electric and gas utility clients.

NV Energy offers two opt-in energy assessment services to residential customers. These services are the 1) In-Home Energy Assessment ("IHEA") and 2) Online Energy Assessment ("OEA"), both of which focused on the following goals in 2025:

- Deliver large-scale, measurable, and cost-effective reduction in kilowatt hour ("kWh") energy consumption;
- Generate measurable kilowatt ("kW") demand reduction;
- Strengthen NV Energy's relationship with its customers and help them save energy; and
- Expand awareness and adoption of NV Energy's various program offerings within the Demand Side Management ("DSM") program portfolio.

1.1 In-Home Energy Assessments

NV Energy began offering IHEAs to its residential customers in 2015. Each assessment is intended to inform customers about their home's energy use and teach the customer how to reduce it.

During an IHEA, a PowerShift Energy Advisor conducts a walk-through energy audit of the customer's home except during the COVID in mid-March to July, 2020. The advisor reviews a checklist of energy saving findings with the customer and includes recommendations that provide ways to save energy.

An important aspect of the IHEA is the dialogue between the PowerShift Energy Advisor and the customer, including a specific discussion that covers how the home and its occupants use energy. The IHEA considers multiple aspects, such as the age of the home and appliances, indoor and outdoor lighting, and insulation and caulking around doors and windows. The recommendations provided during the IHEA are customized for the customer based on factors identified above.

Since 2019, NV Energy implemented the IHEA program as part of a bundled service appointment, which included the option to have the energy advisor install select energy efficiency products, such as energy efficient light bulbs, advanced power strips, or other measures, during the IHEA. In 2025, the bundled service appointments also supported NV Energy's Direct Install ("DI") program.

1.2 Online Energy Assessments

NV Energy began offering OEAs to its residential customers in August 2017. The OEA dashboard is an online tool available to NV Energy customers via their MyAccount portal. Once a participant completes their home's profile, the customer can view a breakdown of their home's energy consumption disaggregated by end use, which is based on algorithms used to analyze the home's energy consumption history. The online tool also provides customized tips and suggests energy efficient measures that are specific to the customer's home, which help to increase energy efficiency in their home and save money on monthly bills. The online tool compares the customer's energy use to similar nearby homes, including the billing history. Customers can access the online tool as frequently as they would like to access timely billing and energy usage information. NV Energy considers a customer as a participant in the program after completing the Home Profile Survey on the OEA dashboard during the program year.

Previously, NV Energy had considered only customers who had completed the entire Home Profile Survey that includes 12 required questions to be program participants. All other non-required questions may be answered as optional. In 2025, NV Energy expanded the definition of participation in the program from all questions being required to include customers who left only one or two optional questions unanswered on the Home Profile Survey. Exploratory mid-year M&V analyses found no significant difference in savings between participants who had fully completed surveys and those who skipped one or two questions.

1.3 Summary of Program Level Savings

To determine energy savings, the Evaluator used a panel regression model for each assessment type to identify savings attributable to Program participation. the Evaluator avoided double counting savings related to other DSM programs by removing participants who concurrently participated in any other DSM programs from the panel regression model. Because of the high rate of cross participation between the bundled IHEA and DI programs, DI cross participants remained in the IHEA model, and the savings attributed to the DI program were subtracted from the results of the panel regression analysis.

To avoid double counting savings across program years, the Evaluator did not count savings for re-participation in the IHEA and OEA programs until after the effective useful life ("EUL") of the previous assessment. This tracking is manifested in the tabulation of monthly energy savings, reported in Appendix A: Savings per Month by Rate Class.

Critical peak demand (kW) savings was determined using an energy savings curve developed from the ex-post verified energy (kWh) savings.

1.3.1 Program Results: NPC Service Territory

For NV Energy's IHEA and OEA programs in the NPC service territory, the ex-post verified annual energy savings and peak demand reductions are presented in Table 1-1.

Table 1-1. Summary of Ex-Post Verified Energy Impacts, NPC

Program	Annual Energy Savings per Participant (kWh)	Number of Participants	Ex-Post Verified Annual Energy Savings (kWh)	Summer Critical Peak Demand Savings (kW)
In-Home Energy Assessments	322.16	4,778	1,539,280	561.33
Online Energy Assessments	186.15	6,131	1,141,286	307.11
Total		**10,909**	**2,680,566**	**868.44**

The verified ex-post savings for the NPC IHEA program represents a realization rate of 141 percent; for the NPC OEA program the verified ex-post savings represents a realization rate of 105 percent. See Table 1-2 for further details.

Table 1-2. Program-Level Realization Rate, NPC

Program	Ex-Ante Participant Count	Ex-Ante Estimated Annual Energy Savings (kWh)	Ex-Post Participant Count	Ex-Post Verified Annual Energy Savings (kWh)	Energy Savings Realization Rate
In-Home Energy Assessments	4,778	1,089,384	4,778	1,539,280	141%
Online Energy Assessments	6,131	1,091,318	6,131	1,141,286	105%
Total	**10,909**	**2,180,702**	**10,909**	**2,680,566**	**123%**

To determine the cost-effectiveness of the 2025 program in the NPC service territory, the effective useful life ("EUL") is 2.0 years for IHEA and 1.0 year for OEA. Total NPC lifetime energy (kWh) savings, used to determine cost-effectiveness, is provided in Table 1-3.

Table 1-3. Total Lifetime Savings and Savings by Year, NPC

Year	IHEA (2-year EUL)	OEA (1-year EUL)	Total
2025	894,994	682,199	**1,577,193**
2026 (Estimated)	1,539,280	459,086	**1,998,366**
2027 (Estimated)	649,778	0	**649,778**
Total (Lifetime) Savings	**3,084,052**	**1,141,286**	**4,225,338**

1.3.2 Program Results: SPPC Service Territory

SPPC ex-post verified annual energy savings and peak demand reductions for NV Energy's IHEA and OEA programs are presented in Table 1-4.

Table 1-4. Summary of Ex-Post Verified Energy Impacts, SPPC

Program	Annual Energy Savings per Participant (kWh)	Number of Participants	Ex-Post Verified Annual Energy Savings (kWh)	Summer Critical Peak Demand Savings (kW)
In-Home Energy Assessments	225.41	785	176,947	64.53
Online Assessments	173.34	1,717	297,625	75.40
Total		**2,502**	**474,572**	**139.93**

The verified ex-post savings for the SPPC IHEA program represents a realization rate of 213 percent; for the SPPC OEA program the verified ex-post savings represents a realization rate of 81 percent. See Table 1-5 for further details.

Table 1-5. Program-Level Realization Rate, SPPC

Program	Ex-Ante Participant Count	Ex-Ante Estimated Annual Energy Savings (kWh)	Ex-Post Participant Count	Ex-Post Verified Annual Energy Savings (kWh)	Energy Savings Realization Rate
In-Home Energy Assessments	785	83,210	785	176,947	213%
Online Energy Assessments	1,717	367,438	1,717	297,625	81%
Total	**2,502**	**450,648**	**2,502**	**474,572**	**105%**

To determine the cost-effectiveness of the 2025 program in the SPPC service territory, the EUL is 2.0 years for IHEA and 1.0 year for OEA. Total SPPC lifetime energy (kWh) savings, used to determine cost-effectiveness, is provided in Table 1-6.

Table 1-6. Total Lifetime Savings and Savings by Year, SPPC

Year	IHEA (2-year EUL)	OEA (1-year EUL)	Total
2025	105,934	179,652	**285,586**
2026 (Estimated)	176,947	117,973	**294,920**
2027 (Estimated)	71,463	0	**71,463**
Total (Lifetime) Savings	**354,344**	**297,625**	**651,969**

1.4 Summarized Program Recommendations

The recommendations from the 2024 evaluation remain applicable and continue to address core program design and delivery. Table 1-7 summarizes the Evaluator's recommendations to improve future program operations, performance, and evaluations.

Table 1-7: Recommendation Summary

Recommendation	Impacted Programs(s)	Summary
Tailor Recommendations by Housing Type	IHEA, OEA	Modify assessment logic to identify early whether participants live in single-family homes, apartments, rental properties, or older homes. Use this information to filter and prioritize recommendations that are feasible for each situation. Develop specific guidance for renters, including low-cost and portable measures, and provide materials customers can share with landlords or property managers when upgrades require owner approval.
Expand Guidance on Solar, EVs, and Emerging Energy Uses	IHEA, OEA	Update assessment content and educational materials to include clearer information on solar energy options (including community or shared solar where individual installation is not feasible), electric vehicle charging considerations, and other high-consumption equipment. Where applicable, integrate these topics into recommendation outputs rather than limiting them to general education sections.
Improve Visibility of Rebates and Incentives	IHEA, OEA	Present rebate and incentive information for other DSM programs alongside each relevant recommendation rather than in separate sections. Clearly indicate eligibility considerations and next steps for applying these programs. Where possible, provide direct links or references to participating programs to make it easier for customers to act on recommendations.
Enhance Energy-Use Feedback and Visualization	IHEA, OEA	Improve how energy-use information is presented within the assessment results. Where data are available, incorporate clearer visual summaries of usage patterns and highlight how recommended actions may influence consumption. Consider enabling comparisons over time for returning participants to help illustrate progress and reinforce behavior change.

2 PROGRAM OVERVIEW

The In-Home Energy Assessment and Online Energy Assessment programs provide NV Energy customers with assessments of their home's energy use. NV Energy started providing its residential customers with IHEAs in 2015 and OEAs in 2017. Program year 2017 was the first year the Evaluator determined energy savings (kWh) and demand reduction (kW) for the IHEA component of the program, and 2018 was the first program year the Evaluator evaluated these metrics for the OEA component.

During 2025, the program aimed to accomplish the following objectives:

- Deliver large-scale, measurable, and cost-effective reduction in kilowatt hour ("kWh") energy consumption;
- Generate measurable kW demand reduction;
- Strengthen NV Energy's relationship with its customers and help them save energy; and
- Expand awareness and adoption of NV Energy's various program offerings within the DSM program portfolio.

2.1 In-Home Energy Assessments

The energy assessments conducted through the IHEA program component take place in the customer's home and are completed by a trained and certified PowerShift Energy Advisor. Each assessment provides an individualized experience for customers desiring support in understanding their home's energy consumption and managing their home's energy use to reduce costs while maintaining comfortable living conditions. Any NV Energy residential customer can opt into the program by requesting an assessment.

Participants were recruited through a diverse array of channels including targeted television and online advertisements, social media, the online dashboard available through MyAccount, NV Energy educational community outreach events, and direct mailing and e-mailing. NV Energy's contact centers suggested participation in the IHEA program when customers contacted them regarding their billing amount. NV Energy marketed the bundle of IHEA with measures from the Direct Install ("DI") program and this resulted in high cross-participation between the IHEA and DI programs in 2025.

2.2 Online Energy Assessments

Customers access the OEA dashboard through NV Energy's MyAccount webpage. The dashboard provides NV Energy customers access to an online, self-service home energy assessment tool which enables customers to perform their own comprehensive energy assessment of their residence. The online tool compares each customer's home energy use with similar homes, tracks energy use over time, and employs proprietary algorithms to analyze the home's energy consumption history. The online tool is designed to discover opportunities for energy conservation, then recommend specific steps that the customer can take to lower electricity bills.

The online tool features cartoon illustrations that make the energy assessment procedure as user-friendly as possible for customers. The customer may review and update the details of their home (water heater type, number of refrigerators, entertainment devices used, etc.) by completing the 'Home Profile Survey,' and then access energy saving tips and suggestions by category (for example lighting, air conditioning, or appliances). The Home Profile Survey serves to verify and expand on the disaggregation algorithms for a particular customer's home. The tool also guides customers to participate in NV Energy's other DSM programs and provides customers with a customized list of various other energy conservation measures.

Specifically, the online dashboard is designed to:

- Educate customers about innovative energy solutions;
- Encourage customers to participate in DSM programs and services;
- Increase customer knowledge about and interaction with their energy consumption;
- Gain insight into customer behaviors, preferences, and needs;
- Collect customer data to drive and support customer intelligence strategies; and
- Expand customer dialogue with NV Energy and enhance customer engagement.

Any customer can opt into the program. A customer is considered a participant after completing the Home Profile Survey on the online dashboard during the program year. Customers may access the tool as frequently as they desire for timely billing and energy usage information. In 2025, NV Energy considered customers who completed the Home Profile Survey with up to two questions left unanswered. Exploratory mid-year M&V analyses found no significant difference in savings between participants who had fully completed surveys and those who skipped one or two questions.

3 M&V METHODOLOGY

This chapter describes how the Evaluator conducted its impact evaluation work for the 2025 In-Home Energy Assessments and Online Energy Assessments programs.

3.1 Calculation of Energy Savings

This section provides descriptions of the methodology used to determine ex-post verified savings for both energy assessment types offered by NV Energy in 2025. Unless otherwise noted, the methodology used to determine savings for both the IHEA program component and the OEA program component were the same.

3.1.1 Data Preparation

To determine annual energy savings (kWh), the Evaluator used a panel regression model to analyze monthly billing data from the homes of IHEA and OEA participants. The data cleaning steps are presented below.

Data required for the analyses included:

1. Participant lists, including:
    - Customer ID
    - Account ID
    - Participation Timestamp
2. NV Energy provided monthly billing data for participants covering the period January 1, 2024, through December 31, 2025.
3. Regional temperature data obtained from the National Oceanic and Atmospheric Administration ("NOAA"), for both McCarran International Airport in Las Vegas and Reno Tahoe International Airport in Reno.
4. Customer information, including:
    - Customer ID
    - Account ID
    - Zip Code
    - Rate Class
    - Email
    - Phone Number
5. A dual enrollment dataset compiled by the Evaluator of participants in NV Energy's other residential DSM programs.

The Evaluator completed the following steps to prepare the datasets for both the IHEA and OEA analyses.

1. Cleaned data for duplicate bills and string characters in the monthly consumption column.

2. Calendarized billing data, which is the process of splitting bills into the appropriate calendar month by estimating the cost and usage attributable to the portion of the bill that falls in each month.
3. Removed customers with less than six bills prior to treatment.
4. Removed customers with less than three bills post-treatment.
5. Removed bills where consumption was denoted with an estimate flag.
6. Removed outliers for observations that have the following characteristics:
   - Average daily usage either less than 3.33 kWh or greater than three times the standard deviation of the population's energy consumption during a billing cycle and
   - Reading duration is less than seven days or greater than 37 days, which indicates abnormal use.

3.1.2 Participants

The Evaluator received participant lists from NV Energy. To avoid double counting of savings across program years, the Evaluator tracked program participants from previous program years and did not attribute savings in the monthly savings tabulations (Appendix A: Savings per Month by Rate Class) until after the expiration of the EUL of the customer's previous participation in the program. For example, if an IHEA participant accrued savings during the 2024 program year by receiving an energy assessment on June 1, 2024 and later received another energy assessment of the same home on March 1, 2025 (within the 2 year EUL for IHEA), the Evaluator only assigned savings for their participation in the 2025 program from June 1, 2026 through February 28, 2027. There were 148 NPC IHEA participants and 9 SPPC IHEA participants who re-engaged with the program within the EUL of their first engagement. There were 642 NPC OEA participants and 132 SPPC OEA participants who re-engaged with the program within the EUL of their first engagement.

3.1.3 Methodology for Regression Approach

The Evaluator used the mixed effects panel regression model specified in Equation 3-1 to determine daily average electricity savings for program participants. For program year 2025, a pre/post model was used, which identifies the daily savings in the treatment group after controlling for the effects of weather.

Equation 3-1. Mixed Effects Panel Regression Model

$$AEC_{i,t} = \beta_1 CDD_{i,t} + \beta_2 HDD_{i,t} + \beta_3 Post_{i,t} + \alpha_i \text{Customer}_\text{i} + E_{i,t}$$

where:

$AEC_{i,t}$ = Average daily use of electricity for period t for a customer (determined by dividing total usage over a billing period by number of days in that period).

Customer	= A panel of dummy variables of Customers' account numbers.
CDD	= Cooling Degree Days; the mean cooling degree days per day during the billing period.
HDD	= Heating Degree Days; the mean heating degree days per day during the billing period.
$Post$	= Post is a dummy variable, where $Post_i$ = "0" if the monthly period is before the program start date and "1" if not.
E	= An error term.

The subscript i denotes individual customers and t=1,…,T(i) serves as a time index, where T(i) is the number of bills available for customer i. The model is defined as 'mixed effects' because the model decomposes its parameters into fixed-effects for the heating degree days, cooling degree days, pandemic-related stay-at-home orders, and Post variables and random effects (i.e. the individual customer's base use). A fixed effect is assumed to be constant and independent of the sample, while random effects are assumed to be sources of variation (other than natural measurement error) that are uncorrelated with the fixed effects.

In the model, the first billing period after the beginning of treatment is considered the 'deadband period'. Observations that occur in the deadband period are not included in the mixed effects panel regression. The post period begins in the first billing period following the deadband period. The post variable is defined as a '0' in billing periods prior to the beginning of treatment and a '1' for billing periods following the beginning of treatment.

Heating degree day ("HDD") and cooling degree day ("CDD") were the metrics used in the model to control for energy demand based on outside temperature. HDD is derived from the difference between a base temperature of 65 degrees Fahrenheit, the outside temperature above which a building is assumed to need no heating, and the actual outside air temperature. Similarly, CDD is derived from the difference between the actual outside air temperature and 75 degrees Fahrenheit, the outside temperature below which a building is assumed to need no cooling. The 65 degrees Fahrenheit and 75 degrees Fahrenheit temperatures used in the analysis are commonly used base temperatures that are good approximations for typical residential building Heating, Ventilation, and Air Conditioning ("HVAC") systems.

3.1.4 Estimating Coefficients of the Regression Model

With the panel approach, the regression model was applied to data for each participant in the sample before and after participation in the program. The data for IHEA and OEA participants included up to one year of data before treatment and up to one year of data post-treatment for each participant, depending on the program participation date. Table 3-1 describes the coefficients that were determined by using the mixed effects panel model shown in Equation 3-1.

Table 3-1. Description of Coefficients Estimated by Regression Model

Coefficient	Coefficient Description
α_1	Represents the grand mean (i.e., mean of the unique customer-specific intercepts). The customer-specific intercepts control for any customer-specific differences.
β_1	Adjusts for the customer's cooling season weather-sensitive usage.
β_2	Adjusts for the customer's heating season weather-sensitive usage.
β_3	Adjusts for whether customer $\boldsymbol{i}$'s monthly billing data in period $\boldsymbol{t}$ is in the pre or post period. This is the coefficient that is used to determine program savings and is a negative value representing a decrease in energy consumption (i.e. energy savings).

3.1.5 Accounting for Bundled Programs and Upstream Programs

NV Energy administered the IHEA program as part of a bundled service appointment which included the optional installation of select energy efficient products. The bundled service appointments were meant to continue through program year 2025 to support NV Energy's DI program. By virtue of the program design, the Evaluator was not able to remove DI program participants from the sample of homes used in the regression analysis without compromising the accuracy of the modeled results, as doing so would leave very few program participants who only participated in the IHEA program. Therefore, savings attributed to the DI program needed to be removed from regression-derived savings results for the IHEA program.

In addition, NV Energy's Home Energy Saver ("HES") program provided point of sale incentives for energy efficient appliances and energy saving products in 2025. The Evaluator was unable to remove these participants since the upstream program does not collect customer information. Therefore, cross participation must be estimated. The Evaluator estimated cross participation using results from the OEA and IHEA participant surveys. In both surveys, participants were asked if they received incentives from NV Energy for any qualifying products or appliances purchased during 2025. Qualifying products included:

- ENERGY STAR® Clothes Dryers
- ENERGY STAR® Clothes Washers
- ENERGY STAR® Heat Pump Clothes Dryers
- ENERGY STAR® Refrigerators
- ENERGY STAR® Room Air Conditioners
- ENERGY STAR® Air Purifiers
- Advanced Power Strips

Using the percentage of survey respondents that acknowledged receiving an incentive from NV Energy for the products listed above during the program year, the Evaluator estimated HES participation rate by measure for both OEA and IHEA. For measures in which survey-derived participation rate estimates were higher than actual HES participation, estimated cross-participation was limited to the actual number of rebated units. The average ex-post electric

savings per unit for each measure was multiplied by the estimated cross-participation count. Detailed information on ex-post savings calculations for the HES upstream measures can be found in the Home Energy Saver Program 2025 M&V Report.

Using both the DI program savings and the estimated HES cross-participant savings, an adjusted annual savings per treated home was calculated using Equation 3-2 below.

Equation 3-2. Bundled Program Adjustment

$$Adj.\,Annual\ kWh\ per\ participant_{IHEA} = \frac{(Annual\ kWh_{IHEA+DI+HES} - Annual\ kWh_{DI\ cross\ participants} - Annual\ kWh_{HES\ cross\ participants})}{Total\ Participants_{IHEA}}$$

Where:

$Annual\ kWh_{IHEA+DI+HES}$ = annual energy savings (kWh) as calculated by multiplying the number of days in a year by the average daily savings value calculated through the regression model, which is then multiplied by the number of participants in the program.

$Annual\ kWh_{DI\ cross\ participants}$ = first year energy savings (kWh) for cross-participants in the DI program as determined via engineering analysis of measures installed for cross-participants (see M&V Report for the Direct Install Program for reported program savings).

$Annual\ kWh_{HES\ cross\ participants}$ = first year energy savings (kWh) for cross-participants in the HES program as determined via engineering analysis of measures installed for the estimated number of cross-participants (see M&V Report for the Home Energy Saver Program for reported savings per measure).

$Total\ Participants_{IHEA}$ = total participants with attributable savings in the IHEA program.

Calculated in this way, the adjusted annual savings per participant represents the savings attributable only to participation in the IHEA program.

3.1.6 Determination of Effective Useful Life

The EUL is expected to be approximately 2.0 years from the beginning of the treatment period for an IHEA and 1.0 year for an OEA. This is the Evaluator's determination, as the independent, third-party evaluator. This determination is based on experience evaluating numerous, generally similar behavioral programs in recent years.

3.2 Determining the Energy Savings Curve

To allocate energy (kWh) savings per month by rate class and critical peak demand (kW) savings per month by rate class, the Evaluator developed a program-specific energy savings curve for the NPC territory which is depicted in Figure 3-1. Similarly, Figure 3-2 shows the energy savings

curve for SPPC. These energy savings curves were developed from 2021-2022 interval meter data for a sample of control homes from the 2023 Energy Reports program ("ER") and provide a representative example of energy use in a non-treated Nevada premise. For additional discussion of energy savings curves, see the Evaluator's M&V Technical Appendix 1.[1] Because the ER program controls were selected as potential treatment participants for a behavioral program, their energy savings curve is applicable to other behavioral program participants. The energy savings curves show that the savings attributable to the NPC and the SPPC programs are greatest during summer or peak cooling months.

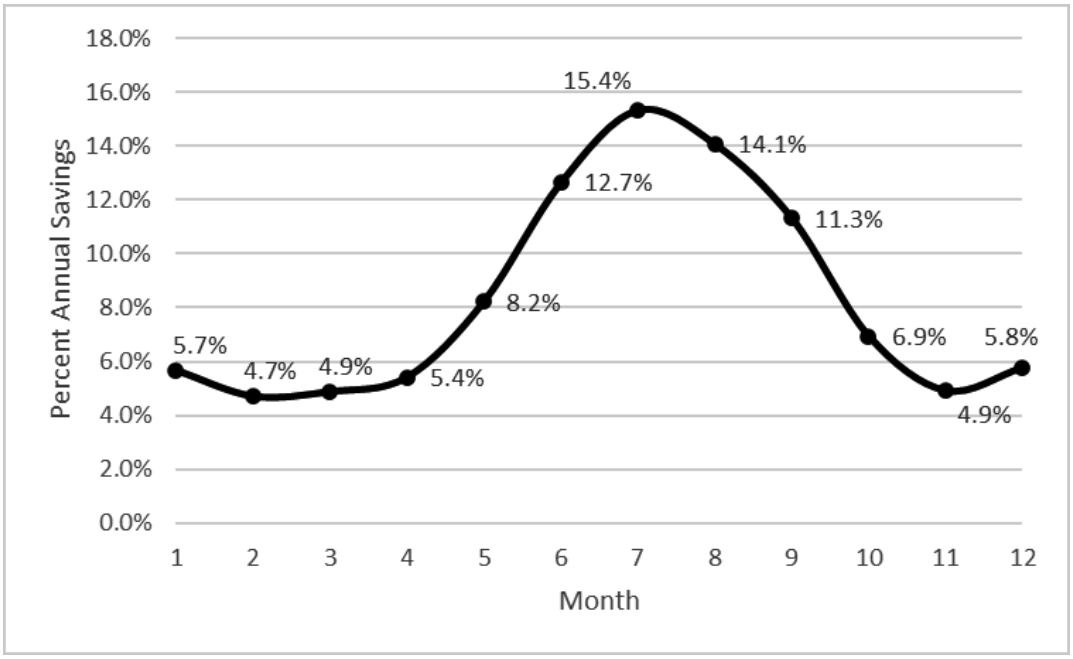


Figure 3-1. Annual Energy Savings Curve for 2025, NPC

[1] M&V Technical Appendix 1 M&V Topics: Calculation Methodology and Monthly Energy (kWh) Savings per Rate Class, 2026. The M&V topics described in this technical appendix include the Evaluator's calculation methodology for critical peak demand (kW) savings and the Evaluator's determination of monthly energy (kWh) savings per rate class.

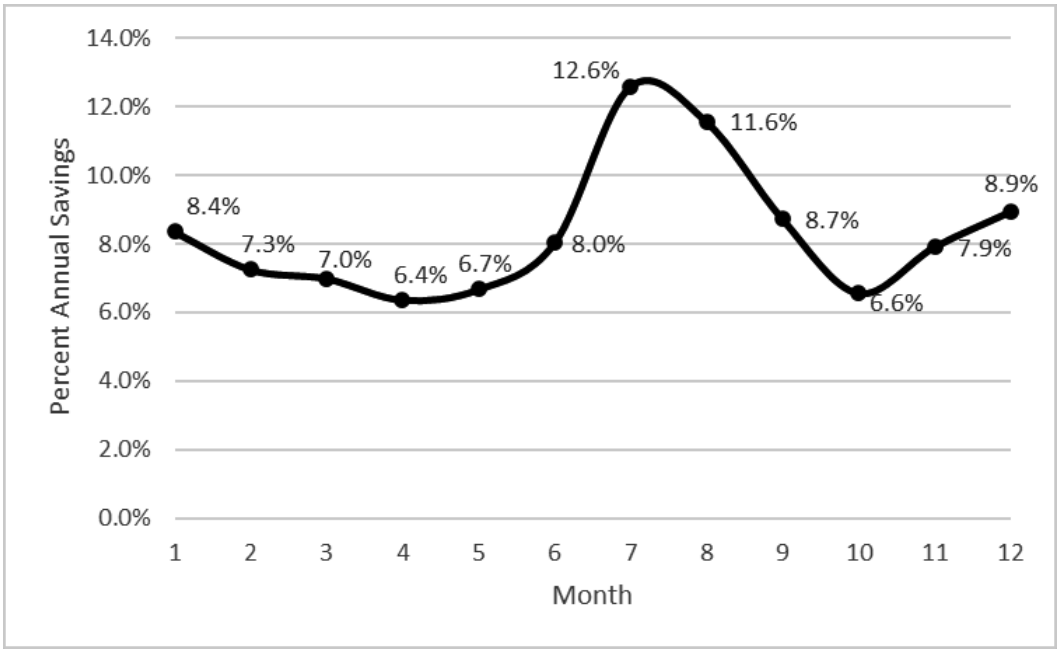


Figure 3-2. Annual Energy Savings Curve for 2025, SPPC

Table 3-2 provides the source and applicability of the 2025 energy savings curve which the Evaluator employed to calculate energy (kWh) savings per month and critical peak demand (kW) savings per month. Appendix A in this M&V report provides tables in which kWh and kW savings per month are listed for all applicable rate classes. For additional general discussion of energy savings curves, see the Evaluator's Technical Appendix to M&V Reports.

Table 3-2. Energy Savings Curves Specific to the Energy Assessments Programs

Energy Savings Curve	Source	Applicability
NPC Program-level curve for 2025 Energy Assessment Programs	NPC program-level energy savings curve from 2025 Energy Assessments ***kW Guru***™ analysis	NPC Residential Behavioral Program Participants
SPPC Program-level curve for 2025 Energy Assessment Programs	SPPC program-level energy savings curve from 2025 Energy Assessments ***kW Guru***™ analysis	SPPC Residential Behavioral Program Participants

3.2.1 Calculation of First Year kWh Savings

First-year kWh savings were calculated on a per month basis using the number of days remaining in the year along with the normalized energy savings curve described above to determine the share of annualized kWh savings realized during the 2025 calendar year. First-year kWh savings were summed by month across each customer rate class in the program population to determine first-year kWh savings per month per rate class.

3.2.2 Calculation of Critical Peak Demand kW Savings

The calculation of kW reductions is based on the per-participant kWh savings values. the Evaluator completed the following steps to calculate peak demand kW reductions.

The critical peak demand period per month is defined as the hour in each month when the system load is most likely to reach a critical peak. Based on the Evaluator's analysis of historical data, the system load is most likely to reach an annual maximum level on any given July or August day during the hour ending at either 16:00 hours (4:00 pm), 17:00 hours (5:00 pm), or 18:00 hours (6:00 pm) in southern Nevada, and at either 17:00 hours (5:00 pm) or 18:00 hours (6:00) pm in northern Nevada. The critical peak demand hours by month are shown in Table 3-3.

Table 3-3. Critical Peak Demand Hour per Month

Month	Critical Peak Period, NPC		Critical Peak Period, SPPC	
	Hour(s)	Ending at:	Hour(s)	Ending at:
January	18-20	18:00, 19:00, or 20:00	18, 19	18:00 or 19:00
February	19, 20	19:00 or 20:00	19, 20	19:00 or 20:00
March	20	20:00	20, 21	20:00 or 21:00
April	20	20:00	21	21:00
May	17, 18	17:00 or 18:00	21	21:00
June	17, 18	17:00 or 18:00	17, 18	17:00 or 18:00
July	16-18	16:00, 17:00, or 18:00	17, 18	17:00 or 18:00
August	16, 17	16:00 or 17:00	17, 18	17:00 or 18:00
September	17	17:00	17, 18	17:00 or 18:00
October	18, 19	18:00 or 19:00	19, 20	19:00 or 20:00
November	18, 19	18:00 or 19:00	18, 19	18:00 or 19:00
December	18, 19	18:00 or 19:00	18, 19	18:00 or 19:00

Critical peak demand (kW) savings were calculated per month and by rate class using ex-post program savings (kWh) and appropriate 8,760-hour energy savings curves. For each 2025 participant in the program, ex-post annualized energy savings were allocated to the participant's rate class, and to the specific energy savings curve. The result was a two-dimensional matrix providing per-rate-class savings per hour for all 8,760 hours of the typical calendar year. The results were inspected for each month to identify the maximum average hourly demand by hour per month as shown in Table 3-3.

3.3 Calculation of Ex-Post Precision

The Evaluator achieved ex-post precision of better than ±10 percent at the 90 percent confidence level for each analysis. Statistical analysis of participants' monthly billing data yields the most accurate and precise determination of actual energy savings that were achieved through the

Program. Analyzing participants' billing data across the whole program achieves optimal precision, given that 1) sampling error is minimized when analyzing the data for a census of participants, and 2) measurement error is null or near zero given that NV Energy meter data and billing data are both correct.

4 M&V RESULTS

This chapter presents results and findings from the data collection and energy savings analysis.

4.1 NPC In-Home Energy Assessments

4.1.1 Treatment Participants

Figure 4-1 shows the number of participants for the IHEA program in southern Nevada for each month of 2025. As seen in the figure below, participation is higher in the first half year and lower in the last few months of the program year.

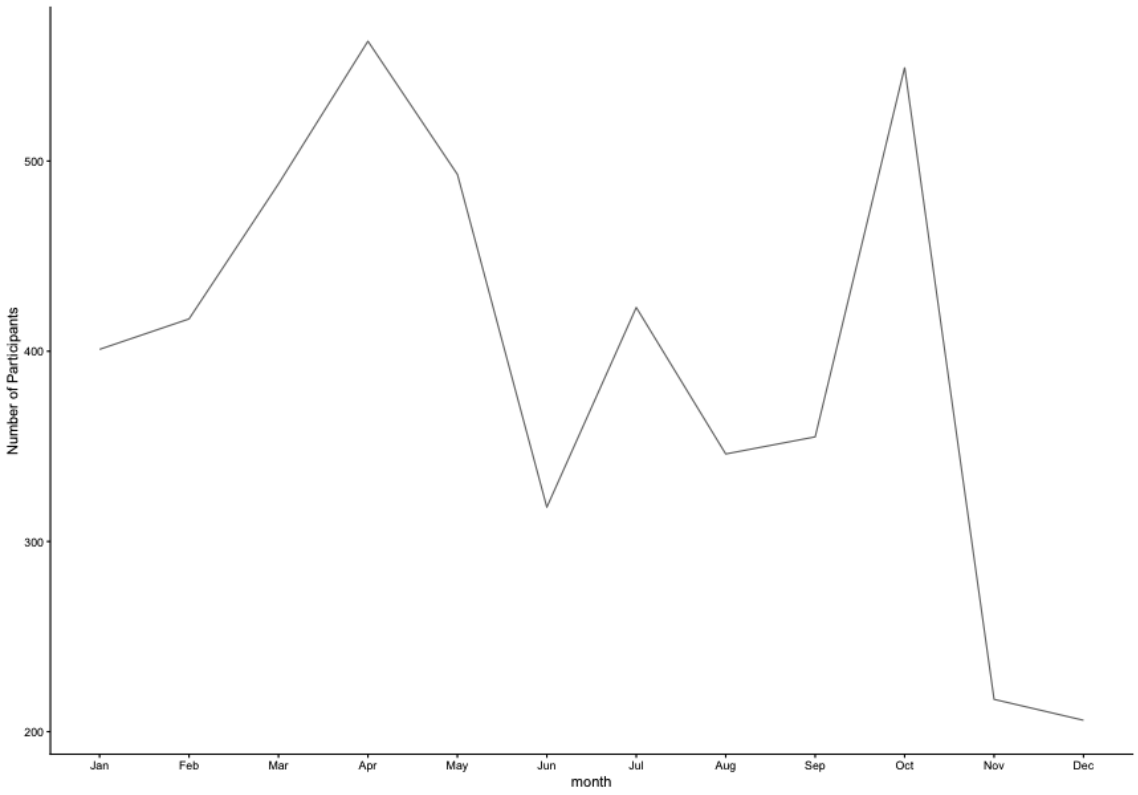


Figure 4-1. IHEA Count of Program Participants per Month, NPC

4.1.2 Cross-Participants

Cross-participants are treatment group members who also participated in another NV Energy DSM program. The Evaluator removed cross-participants from the regression analysis, except for the DI program, which is bundled with the IHEA program delivery, and for the upstream HES program, for which participants are not tracked. When a customer participates in an in-home energy assessment, they are typically offered energy efficient measures through the DI program at the

same time. The DI program provides installation of measures such as light-emitting diode ("LED") lights, advanced power strips, and air filters. Since such a high percentage (83 percent) of IHEA participants receive the Direct Install measures at the same time, cross participants in the DI program were not removed from the regression analysis. The savings from this program were subtracted from the program level savings. Table 4-1 provides the breakdown of cross participation of 2025 IHEA participants in other programs and provides a disaggregation of bundled program cross participation.

Table 4-1. IHEA Treatment Group Members in NV Energy's Other DSM Programs, NPC

Other DSM Programs	Number of IHEA Participants in other DSM Program	Percent of IHEA Participants in other DSM Programs[†]
IHEA only	295	6.2%
Low Income	137	3%
Home Energy Reports	593	13%
Online Assessments	174	4%
Direct Install	3,916	83%
Residential Air Conditioning	43	<1%
Pool Pumps	13	<1%
Residential DR	2,776	59%
Total IHEA Participants in Other Programs	**4,481**	**94%**

[†]*Customers can participate in more than 1 additional DSM program.*

4.1.3 Data Cleaning

Table 4-2 shows the data cleaning steps the Evaluator took, and the number of accounts left after each step to determine the data to be used in the model. The steps and rational for removing participants were based on whether they are cross-participants in other DSM programs, billing records were duplicates, estimates, or outliers, or participants had insufficient billing data to include in the panel regression analysis. Among the 1,346 accounts removed due to insufficient billing data, 1,200 had fewer than 3 post-treatment bills. A description of the data cleaning steps is provided in Section 3.1.1.

Table 4-2. IHEA Participants Number of Participants After Each Data Cleaning Step, NPC

Cleaning Step	Treatment Participants Removed After Each Data Cleaning Step	Treatment Participants Remaining After Each Data Cleaning Step
DSM Central participant list	0	4,778
Remove Known Cross Participants (Except for Direct Install)	2,959	1,819
Remove Bill Records that are Estimates and Duplicates	128	1,691
Remove Outliers	1	1,690
Remove Accounts with Insufficient Billing Data	1,346	344
Number of NPC Participants in Final Model:		**344**

4.1.4 Calculated Energy Savings (kWh)

Table 4-3 provides the results of the mixed-effects panel regression modeling that was performed on the data. For this analysis, the Evaluator considers these results to be statistically significant because the absolute value of the t-value (8.07) output from the regression model is greater than 1.645, the z-score which corresponds to the 90 percent confidence level for a two-sided t-test. This shows a high likelihood that the difference between pre-period and post-period consumption is not zero, and that there is a savings trend.

Table 4-3. IHEA Results of Mixed Effects Panel Regression Modeling, NPC

Intercept (t-value)	HDD65 (t-value)	CDD75 (t-value)	Post (t-value)	r-squared
24.07 (18.72)	0.09 (1.30)	1.75 (57.27)	-1.65 (-8.07)	0.78

4.1.4.1 Savings Adjustments

Since IHEA participants in the DI program were not removed from the regression analysis for program year 2025, energy savings (kWh) attributed to DI cross-participants were subtracted from the total ex-post electric savings to avoid double counting of energy savings. Energy savings (kWh) estimated from cross-participant purchases of HES upstream measures were also subtracted from the total ex-post electric savings to avoid double counting of energy savings. The removed energy savings attributed to the DI program and estimated HES upstream cross-participation are shown in Table 4-4.

Additionally, customers who re-participate in the IHEA program within the EUL of their last in-home assessment require a savings adjustment. The within-EUL corrected program-level ex-post savings were determined using energy savings curves that are designed to calculate the portion of annual energy savings that occurs during each month of the year while accounting for the temporal

nature of energy savings as well as project implementation dates. Please see †Totals *may not sum exactly due to rounding. Same for subsequent tables.*

Table 6-2 in Appendix A: Savings per Month by Rate Class for further details.

Table 4-4. Determining IHEA Annual Energy Savings per Participant, NPC

IHEA and Direct Install	Daily Energy (kWh) Savings	1.65
	Annual Energy (kWh) Savings per Participant	602.25
	Count of Participants	4,778
	Annual Energy (kWh) Savings	2,877,550
Cross-Participants	Home Energy Saver Annual Energy (kWh) Savings	41,258
	Direct Install Cross Participant Annual Energy (kWh) Savings	1,291,430
IHEA only	Annual Energy (kWh) Savings per IHEA Participant	323.33
	Ex-post (kWh) Savings Adjusted for Bundled Programs	1,544,862
Within-EUL Correction	Customers who received a 2025 IHEA within their last IHEA EUL	148
	Final Annual Energy (kWh) Savings per Participant	**322.16**
	Final Ex-post (kWh) Savings	**1,539,280**

Table 4-5 provides average annual kWh savings per participant and program-level annual kWh savings for the 2025 In-Home Energy Assessment Program. Final verified kWh savings for the IHEA Program are defined as the within-EUL corrected ex-post savings (Table 4-4); annual kWh savings per household were calculated by dividing the within-EUL corrected program-level savings by the total number of IHEA participants.

Table 4-5. Summary of Annual IHEA kWh Savings, NPC

Program	Daily Energy (kWh) Savings	Annual Energy (kWh) Savings per Participant	Number of Participants	Energy Savings (kWh)
IHEA	0.88	322.16	4,778	1,539,280

Table 4-6 presents the total lifetime savings (kWh) for the NPC IHEA program.

Table 4-6. Summary of Ex-post Verified kWh Savings for IHEA Participants, NPC

Year	IHEA
2025	894,994
2026 (Estimated)	1,539,280
2027 (Estimated)	649,778
Total (Lifetime) Savings	**3,084,052**

4.1.5 Calculated Summer Critical Peak Demand Savings (kW)

Critical peak demand reduction (kW) was calculated by month and by rate class, utilizing ex-post verified energy (kWh) savings that were disaggregated into 8,760 hourly bins with an appropriate program-level, 8,760-hour energy savings curve. The annual summer critical peak demand savings for this program are reported in Table 4-7.

Table 4-7. IHEA Summer Critical Peak Demand kW Savings, NPC

Subprogram	Summer Critical Peak Demand Savings (kW)
IHEA	561.33

The complete table of ex-post verified summer critical peak demand (kW) savings by month and rate class are provided in Appendix A.

4.1.6 Participant Surveys

The Evaluator collected complete survey responses from 361 NPC IHEA program participants who were able to recall receiving an In-Home Assessment during the 2025 program year. The survey tool is provided in Appendix D: Survey Instruments. An abbreviated summary of these survey responses is provided below.

Participants were largely pleased with aspects of the PowerShift bundled appointments. Most respondents noted the advisor inspected their HVAC system (81 percent) and discussed potential energy savings (80 percent). Fewer participants reported that the advisor inspected their appliances (73 percent) and inspected their home's insulation (61 percent). Only 56 percent of respondents said that they were emailed an energy assessment report with energy efficiency recommendations.

Participants found the In-Home Energy Assessment with the PowerShift Energy Advisor informative and the energy saving tips clear. Most respondents found the In-Home Energy Assessment with the PowerShift Energy Advisor to be informative, with 37 percent of respondents finding it extremely informative and 37 percent finding it very informative. During the assessment, 72 percent of respondents reported learning valuable energy-saving tips for their homes. Most (89

percent) agreed that the information was either extremely or very clear. Additionally, 85 percent implemented energy-saving recommendations they received.

Survey participants made various behavior adjustments after their energy assessment and reflects a broad adoption of energy saving habits. After the energy assessment, participants most frequently turned off lights or ceiling fans when not in the room (88 percent), used their dishwasher or laundry machines only with full loads (82 percent), reduced the thermostat temperature in winter or increased it in summer (81 percent), and replaced air filters (79 percent). Other common actions included washing clothes in cold water (73 percent), letting dishes air dry (68 percent), cleaning clothes dryer vent (66 percent), reduced shower time (60 percent), using a portable fan instead of air conditioning (55 percent), and tuning up air conditioning or heating system (47 percent). Less frequent actions included adjusting freezer or refrigerator temperature settings (41 percent), checking heating or cooling ducts for leaks (36 percent), installing energy efficient appliances (35 percent), and lowering water temperature (34 percent). Vacuuming refrigerator coils (28 percent) and unplugging a second refrigerator or freezer (18 percent) were the least commonly reported actions.

Most participants did not receive any PowerShift rebates for appliance purchases. Ninety-four percent of respondents said they did not receive any rebates for appliance purchases. The most frequently reported rebates received were for advanced power strips (4 percent), ENERGY STAR certified clothes washers (3 percent), ENERGY STAR certified clothes refrigerators (2 percent), and ENERGY STAR certified clothes dryers (2 percent).

Saving on utility bills was a primary motivator for participation in the IHEA. Participants joined the PowerShift In-Home Energy Assessment mainly to save money on energy bills (36 percent), to improve their home's energy efficiency (28 percent), and because NV Energy provided it for free (16 percent). Some respondents mentioned additional motivations such as identifying potential energy saving upgrades, being recommended to do so by NV Energy representatives and friends, to upgrade thermostats and because of frustration over high energy bills.

Most participants requested the PowerShift In-Home Energy Assessment online or by phone. Most respondents requested their PowerShift In-Home Energy Assessment by signing up on NV Energy's website (58 percent) or by calling NV Energy directly (33 percent).

Feedback on the PowerShift In-Home Energy Assessment identified some areas of improvement. Thirty-four percent of participants indicated that there are no improvements needed. The most frequently noted areas of improvement included installing more energy-saving items during the visit (30 percent), greater follow-up with additional resources and support (28 percent), a more thorough inspection of their home (23 percent), and offering a more detailed report with actionable steps (20 percent).

The PowerShift program successfully reached participants through diverse channels, with notable percentages from NV Energy emails. The PowerShift program reached participants through various channels, with 52 percent hearing about it through NV Energy emails, 16 percent through previous experience with NV Energy's energy efficiency programs, and 6 percent via word-of-mouth referrals from friends or family. Other channels included social media, through

internet searches, television commercials, the PowerShift Smart Shop online marketplace, and through their bill.

Customer satisfaction levels for various aspects of the PowerShift program were generally high. A combined 85 percent of respondents reported being satisfied (very or somewhat) with the information received from their PowerShift Energy Advisor and with the performance of the items installed. Similarly, overall In-Home Energy Assessment received a satisfaction rate of 84 percent. For NV Energy's PowerShift products and services, 83 percent of respondents expressed satisfaction, while NV Energy as a service provider had a combined satisfaction rate of 79 percent. Most respondents (87 percent) found the sign-up process for a visit from the PowerShift Energy Advisor to be very or somewhat easy. Suggestions for improving the sign-up process include having more knowledgeable phone representatives, improving communication, especially if advisors are running late, and a more streamlined phone sign-up process.

4.2 NPC Online Energy Assessments

4.2.1 Treatment Participants

Figure 4-2 shows the number of participants for the OEA program per month. As seen in the figure, participation stays steady in the beginning of the year, increases significantly in the summer months, and then tapers off in the last months of the program year.

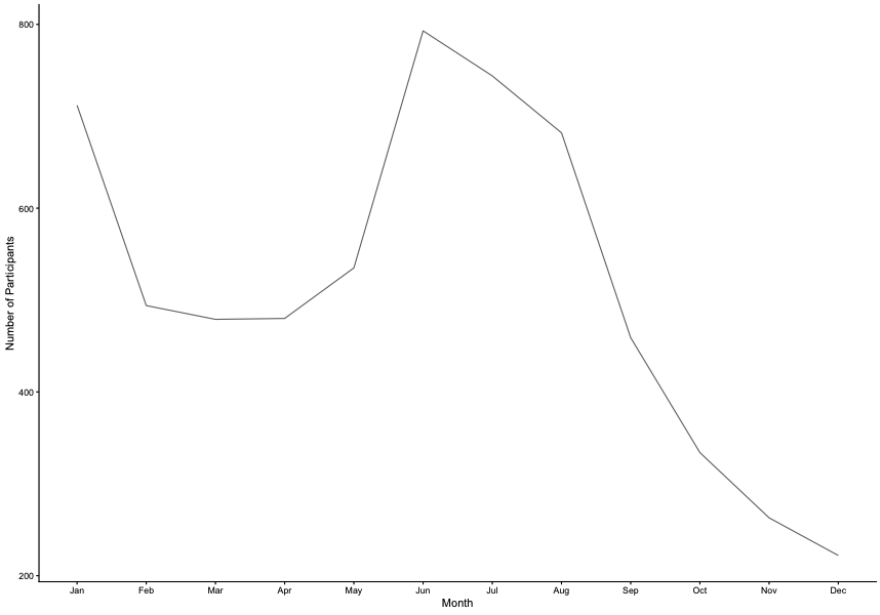


Figure 4-2. OEA Count of Program Participants per Month, NPC

4.2.2 Cross Participants

The Evaluator removed cross-participants from the regression analysis. Cross-participants are treatment group members who also participated in another downstream NV Energy DSM program.

Downstream programs are programs in which the participants are known. Table 4-8 shows that there were 2,188 unique cross-participants, or 35 percent of the OEA participants.

Table 4-8. OEA Treatment Group Members in NV Energy's Other DSM Programs, NPC

Other DSM Programs	Number of OEA Treatment Participants in other DSM Programs	Percent of OEA Participants in other DSM Programs†
OEA only	4,009	65%
Low Income	16	<1%
Home Energy Reports	941	15%
IHEA	174	3%
Direct Install	145	2%
Residential Air Conditioning	28	<1%
Pool Pumps	22	<1%
Residential DR	1,414	23%
Total OEA Participants in Other Programs	**2,122**	**35%**

†*Customers can participate in more than 1 additional DSM program.*

4.2.3 Data Cleaning

Table 4-9 shows the data cleaning steps the Evaluator took, and the number of accounts left after each step to determine the data to be used in the model. The steps and rational for removing participants were based on whether they are cross-participants in other DSM programs, billing records were duplicates, estimates, or outliers, or participants had insufficient billing data to include in the panel regression analysis. Among the 2,794 accounts removed for insufficient billing data, 2,443 had fewer than 3 post-treatment bills. A description of the data cleaning steps is provided in Section 3.1.1.

Table 4-9. OEA Participants Number of Participants After Each Data Cleaning Step, NPC

Cleaning Step	Treatment Participants Removed After Each Data Cleaning Step	Treatment Participants Remaining After Each Data Cleaning Step
DSM Central participant list	0	6,131
Remove Cross Participants	2,122	4,009
Remove Bill Records that are Estimates and Duplicates	0	4,009
Remove Outliers	4	4,005
Remove Accounts with Insufficient Billing Data	2,794	1,211
Number of Participants in Final Model:		**1,211**

4.2.4 Calculated Energy Savings (kWh)

Table 4-10 provides the results of the mixed-effects panel regression modeling that was performed on the data. The Evaluator considers these results to be statistically significant because the absolute value of the t-value (9.20) output from the regression model is greater than 1.645, the z-score which corresponds to the 90% confidence level for a two-sided t-test. This shows a high likelihood that the difference between pre-period and post-period consumption is not zero, and that there is a savings trend.

Table 4-10. OEA Results of Mixed Effects Panel Regression Modeling, NPC

Intercept (t-value)	HDD65 (t-value)	CDD75 (t-value)	Post (t-value)	r-squared
19.92 (43.21)	0.45 (32.64)	1.74 (284.09)	-0.57 (-9.20)	0.81

4.2.4.1 Savings Adjustments

Since HES upstream participants were not known and therefore could not be removed from the regression analysis for program year 2025, energy savings (kWh) attributed to HES cross participants were subtracted from the total ex-post savings to avoid double counting. The total estimated HES cross-participant savings are reported in Table 4-11.

Additionally, customers who re-participate in the OEA program within the EUL of their last online energy assessment require a savings adjustment. The within-EUL corrected program-level ex-post savings were determined using energy savings curves that are designed to calculate the portion of annual energy savings that occur during each month of the year while accounting for the temporal nature of energy savings as well as project implementation dates. Please see †Totals *may not sum exactly due to rounding. Same for subsequent tables.*

Table 6-2 in Appendix A: Savings per Month by Rate Class for further details.

Table 4-11. Determining OEA Annual Energy Savings per Participant, NPC

OEA	Daily Energy (kWh) Savings	0.57
	Annual Energy (kWh) Savings per Participant	208.05
	Count of Participants	6,131
	Annual Energy (kWh) Savings	1,275,555
Cross-Participants	Home Energy Saver Annual Energy (kWh) Savings	76,994
OEA only	Annual Energy (kWh) Savings per OEA Participant	195.49
	Ex-post (kWh) Savings Adjusted for Bundled Programs	1,198,561
Within-EUL Correction	Customers who took a 2025 OEA within their last OEA EUL	642
	Final Annual Energy (kWh) Savings per Participant	**186.15**
	Final Ex-post (kWh) Savings	**1,141,286**

Table 4-12 provides average annual kWh savings per participant, and program-level annual kWh savings for the 2025 OEA program. Final verified kWh savings for the OEA program are defined as the within-EUL corrected ex-post savings (Table 4-11); annual kWh savings per household were calculated by dividing the within-EUL corrected program-level savings by the total number of OEA participants.

Table 4-12. Summary of Annual OEA kWh Savings, NPC

Program	Daily Energy (kWh) Savings	Annual Energy (kWh) Savings per Participant	Number of Participants	Energy Savings (kWh)
OEA	0.51	186.15	6,131	1,141,286

Table 4-13 below presents the total lifetime savings (kWh) for the NPC OEA program.

Table 4-13. Summary of Ex-post Verified kWh Savings for OEA Participants, NPC

Year	OEA
2025	682,199
2026 (Estimated)	459,086
Total (Lifetime) Savings	**1,141,286**

4.2.5 Calculated Summer Critical Peak Demand Savings (kW)

Critical peak demand savings (kW savings) are typically calculated by month and by rate class, utilizing ex-post verified energy (kWh) savings that were disaggregated into 8,760 hourly bins with an appropriate program-level, 8,760-hour energy savings curve. The annual summer critical peak demand savings for this program are reported in Table 4-14.

Table 4-14. OEA Summer Critical Peak Demand kW Savings, NPC

Subprogram	Summer Critical Peak Demand kW Savings
OEA	307.11

4.2.6 Participant Surveys

4.2.6.1 Completed OEA

The Evaluator collected complete survey responses from 210 NPC OEA program participants who recalled completing an OEA during the 2025 program year. The survey tool is provided in Appendix D: Survey Instruments. The following summarizes the participants' experiences with the OEA, along with valuable insights for improvement and increased user satisfaction.

Sources of OEA Awareness Among Participants. The majority of OEA participants (68 percent) learned about the program through the NV Energy website (MyAccount), followed by 14 percent through NV Energy emails, as highlighted in Table 4-15. Other sources included NV Energy inserts or printed messages on bills, NV Energy Home Energy Advisor, word-of-mouth, and internet search.

Table 4-15. Participant Sources of Program Awareness – Completed OEA

Source	Percent (n=202)
NV Energy website (MyAccount)	68%
NV Energy email	14%
NV Energy inserts/printed messages on bills	6%
NV Energy Home Energy Advisor	2%
Friend, relative or colleague (word-of-mouth)	1%
Internet search	1%
Other sources	4%
Don't know	2%

Participants' Motivations for Taking OEA. The primary reason participants completed the Online Energy Assessment was to learn how to save energy and reduce their bills (56 percent). Other motivations included to better understand their home's energy usage (21 percent), out of curiosity or interest in energy efficiency (12 percent), the utility providing the assessment for free (5 percent), and various other reasons (8 percent), such as seeing if they qualified for energy-saving

products or rebates, comparing usage with similar households, environmental reasons, evaluating the cost of charging an electric vehicle, and frustration with high bills.

OEA Participation and Ease. Participants mainly reviewed their home's energy usage (77 percent), followed by questions about appliances (72 percent), heating and cooling equipment (61 percent), water heaters (48 percent), smart thermostats (47 percent), and lighting (47 percent). Most found the Online Energy Assessment very easy (31 percent) or somewhat easy (38 percent) to complete. Twenty-four percent rated it neutral, while 3 percent found it somewhat difficult and 4 percent were unsure. Participants reported difficulties navigating the Online Assessment dashboard, being unable to answer some questions, technical issues, and not understanding the energy saving recommendations provided.

Energy-Saving Tips from OEA. The most frequently provided recommendations from the Online Energy Assessment were no-cost or low-cost methods for conserving energy (46 percent), followed by tips specific to seasonal energy savings (42 percent), and energy saving measures that may be cost-justified for their home (29 percent). Other recommendations included tips that require an upfront investment or purchase and information about rebates or incentives for energy efficient upgrades.

Impact of Energy-Saving Tips from OEA. Sixty-four percent of respondents agreed that the OEA helped them to understand how they use energy at home, 58 percent agreed the contents of the OEA website were interesting, and 55 percent agreed that they have become aware of areas that could be more energy efficient. Other impacts that participants agreed on included that the OEA recommendations were practical for their home (50 percent), they learned something new from the OEA (50 percent), they received recommendations that they could not implement (47 percent). Thirty-five percent of participants agreed that they received recommendations aligned with their budget and 32 percent agreed that they reduced their energy bill because of the tips and recommendations from the OEA.

Energy-Saving Activities Post-OEA. Participants engaged in various energy-saving activities in 2025, such as replacing air filters, checking heating and cooling ducts, vacuuming fridge coils, adjusting thermostat temperatures, tuning up HVAC systems, and more. Below are the percentage of participants who said that they performed each activity in 2025.

- Replaced air filters: 94 percent
- Checked heating/cooling ducts for leaks: 49 percent
- Vacuumed refrigerator coils: 47 percent
- Tuned-up HVAC system: 68 percent
- Cleaned dryer vent: 75 percent
- Lowered water heater setting: 45 percent
- Adjusted fridge/freezer settings: 51 percent
- Unplugged second fridge/freezer: 20 percent

- Installed energy efficient appliances: 46 percent
- Reduced thermostat in winter / Increased in summer: 87 percent
- Used dishwasher or laundry only with full loads: 82 percent
- Turned off lights or ceiling fans when not in room: 88 percent
- Washed clothes in cold water: 79 percent
- Used a portable fan instead of air conditioning: 55 percent
- Let dishes air dry: 73 percent
- Reduced shower time: 61 percent

Impact on Energy Bills. Over a third of the participants (35 percent) reported lower energy bills after changes from the Online Energy Assessment. However, 34 percent saw no change, 9 percent saw an increase, and 16 percent found it too early to tell. Most participants who saw a decrease in their energy bill were satisfied (40 percent very satisfied, 46 percent satisfied) with their energy bill savings, while 2 percent were very dissatisfied and 10 percent were neutral.

Utilization of PowerShift Rebates. Most respondents (91 percent) reported not receiving appliance rebates from NV Energy. Five percent of respondents reported receiving a rebate on an advanced power strip, and 5 percent reported receiving a rebate on an ENERGY STAR certified refrigerator. Other reported rebates include ENERGY STAR certified clothes dryer (4 percent), ENERGY STAR certified clothes washer (4 percent), ENERGY STAR certified air purifier (1 percent), ENERGY STAR certified room air conditioner (1 percent), and ENERGY STAR certified heat pump clothes dryer (1 percent). Forty-six percent of respondents who received a rebate did so because of the OEA.

Overall Satisfaction with OEA. The Online Energy Assessment received positive feedback from most respondents, with 60 percent reporting they were either very or somewhat satisfied. Additionally, 66 percent expressed satisfaction with the information, tips, and recommendations provided by the OEA, and 70 percent were satisfied with the time required to complete it. However, some expressed dissatisfaction with the high cost of recommendations, and a lack of new information. Common complaints included that bills didn't appear to decrease after making recommended changes, recommendations were for appliances not in the home and that recommendations weren't relevant for older homes and apartments.

Recommendations for OEA Improvement. Some participants suggested providing more recommendations for rental properties or apartments, and more personalized results. Others suggested shortening the assessment and offering more incentives, such as solar panel rebates for apartment complexes. Additionally, there were recommendations for more information about solar power usage and comparisons against previous assessments.

4.2.6.2 Partially Completed OEA

The Evaluator collected complete survey responses from 91 NPC OEA program participants who recalled taking an OEA during the 2025 program year but did not complete it. The survey tool is provided in Appendix D: Survey Instruments. The following summarizes the participants' experiences with the OEA, along with valuable insights for improvement and increased user satisfaction.

Sources of OEA Awareness Among Participants. The majority of OEA participants (67 percent) learned about the program through the NV Energy website (MyAccount), followed by 11 percent through NV Energy emails, as highlighted in Table 4-16. Other sources included NV Energy inserts or printed messages on bills, NV Energy Home Energy Advisor, word-of-mouth, internet, NV Energy newsletter, NV Energy sponsored booths, and social media.

Table 4-16. Participant Sources of Program Awareness – Partially Completed OEA

Source	Percent (n=88)
NV Energy website (MyAccount)	67%
NV Energy email	11%
NV Energy inserts/printed messages on bills	6%
NV Energy Home Energy Advisor	5%
NV Energy newsletter	3%
Other sources	6%
Don't know	2%

Participants' Motivations for Taking OEA. The primary reason participants completed the Online Energy Assessment was to learn how to save energy and reduce their bills (51 percent). Other motivations included to better understand their home's energy usage (17 percent), out of curiosity or interest in energy efficiency (16 percent), to compare usage with similar households (8 percent), and various other reasons (8 percent), such as seeing if they qualified for energy-saving products or rebates, the utility providing it for free, a recommendation from a family member, friend or NV Energy Home Energy Advisor, and frustration with high bills.

OEA Participation and Ease. Participants mainly reviewed their home's energy usage (82 percent), followed by questions about appliances (71 percent), heating and cooling equipment (58 percent), water heaters (52 percent), and lighting (47 percent). Most found the Online Energy Assessment very easy (30 percent) or somewhat easy (39 percent) to complete. Twenty-four percent rated it neutral, while 2 percent found it somewhat difficult, 4 percent found it very difficult, and 1 percent were unsure. Participants reported difficulties with signing on to MyAccount, navigating the Online Assessment dashboard, being unable to answer some questions, unclear questions, technical issues, the assessment taking too long to complete, and not understanding the energy saving recommendations provided.

Energy-Saving Tips from OEA. The most frequently provided recommendations from the Online Energy Assessment were no-cost or low-cost methods for conserving energy (53 percent), followed by tips specific to seasonal energy savings (46 percent), and energy saving measures that

may be cost-justified for their home (31 percent). Other recommendations included tips that require an upfront investment or purchase and information about rebates or incentives for energy efficient upgrades.

Impact of Energy-Saving Tips from OEA. Seventy-four percent of respondents agreed that the OEA helped them to understand how they use energy at home, 69 percent agreed that they have become aware of areas that could be more energy efficient, and 67 percent agreed the contents of the OEA website were interesting. Other impacts that participants agreed on included that the OEA recommendations were practical for their home (62 percent), they learned something new from the OEA (56 percent), and they received recommendations that they could not implement (46 percent). Forty-four percent of respondents agreed that the recommendations aligned with their budget and 39 percent agreed that they reduced their energy bill because of the tips and recommendations from the OEA.

Energy-Saving Activities Post-OEA. Participants engaged in various energy-saving activities in 2025, such as replacing air filters, checking heating and cooling ducts, vacuuming fridge coils, adjusting thermostat temperatures, tuning up HVAC systems, and more. Below are the percentage of participants who said that they performed each activity in 2025.

- Replaced air filters: 93 percent
- Checked heating/cooling ducts for leaks: 49 percent
- Vacuumed refrigerator coils: 40 percent
- Tuned-up HVAC system: 52 percent
- Cleaned dryer vent: 81 percent
- Lowered water heater setting: 54 percent
- Adjusted fridge/freezer settings: 63 percent
- Unplugged second fridge/freezer: 21 percent
- Installed energy efficient appliances: 56 percent
- Reduced thermostat in winter / Increased in summer: 85 percent
- Used dishwasher or laundry only with full loads: 92 percent
- Turned off lights or ceiling fans when not in room: 97 percent
- Washed clothes in cold water: 75 percent
- Used a portable fan instead of air conditioning: 60 percent
- Let dishes air dry: 85 percent
- Reduced shower time: 68 percent

Impact on Energy Bills. Over a third of the participants (42 percent) reported lower energy bills after changes from the Online Energy Assessment. Nineteen percent saw no change, 13 percent

saw an increase, and 22 percent found it too early to tell. Most participants who saw a decrease in their energy bill were satisfied (30 percent very satisfied, 52 percent satisfied) with their energy bill savings after changes, while 7 percent were very dissatisfied and 11 percent were neutral.

Utilization of PowerShift Rebates. Most respondents (86 percent) reported not receiving appliance rebates from NV Energy. Eleven percent of respondents reported receiving a rebate on an ENERGY STAR certified clothes dryer and 11 percent reported receiving a rebate on an ENERGY STAR certified clothes washer. Other reported rebates include an advanced power strip (5 percent), an ENERGY STAR certified refrigerator (3 percent), an ENERGY STAR certified air purifier (3 percent), an ENERGY STAR certified room air conditioner (3 percent), and an ENERGY STAR certified heat pump clothes dryer (3 percent). Fifty-six percent of respondents who received a rebate did so because of the OEA.

Overall Satisfaction with OEA. The Online Energy Assessment received positive feedback from most respondents, with 67 percent reporting they were either very or somewhat satisfied. Additionally, 66 percent expressed satisfaction with the information, tips, and recommendations provided by the OEA, and 81 percent were satisfied with the time required to complete it. However, some expressed dissatisfaction with questions not reflecting previously completed answers.

Recommendations for OEA Improvement. Some participants suggested providing more recommendations for rental properties or apartments, and more awareness to consumers about rebates on energy efficient appliances. Others suggested adding information about electric vehicle charging and placing more emphasis on the energy-saving impact of recommendations.

4.3 SPPC In-Home Energy Assessments

4.3.1 Treatment Participants

Figure 4-3 shows the number of participants per month for the IHEA program in northern Nevada. As seen in the figure below, participation per month was the lowest in the summer months.

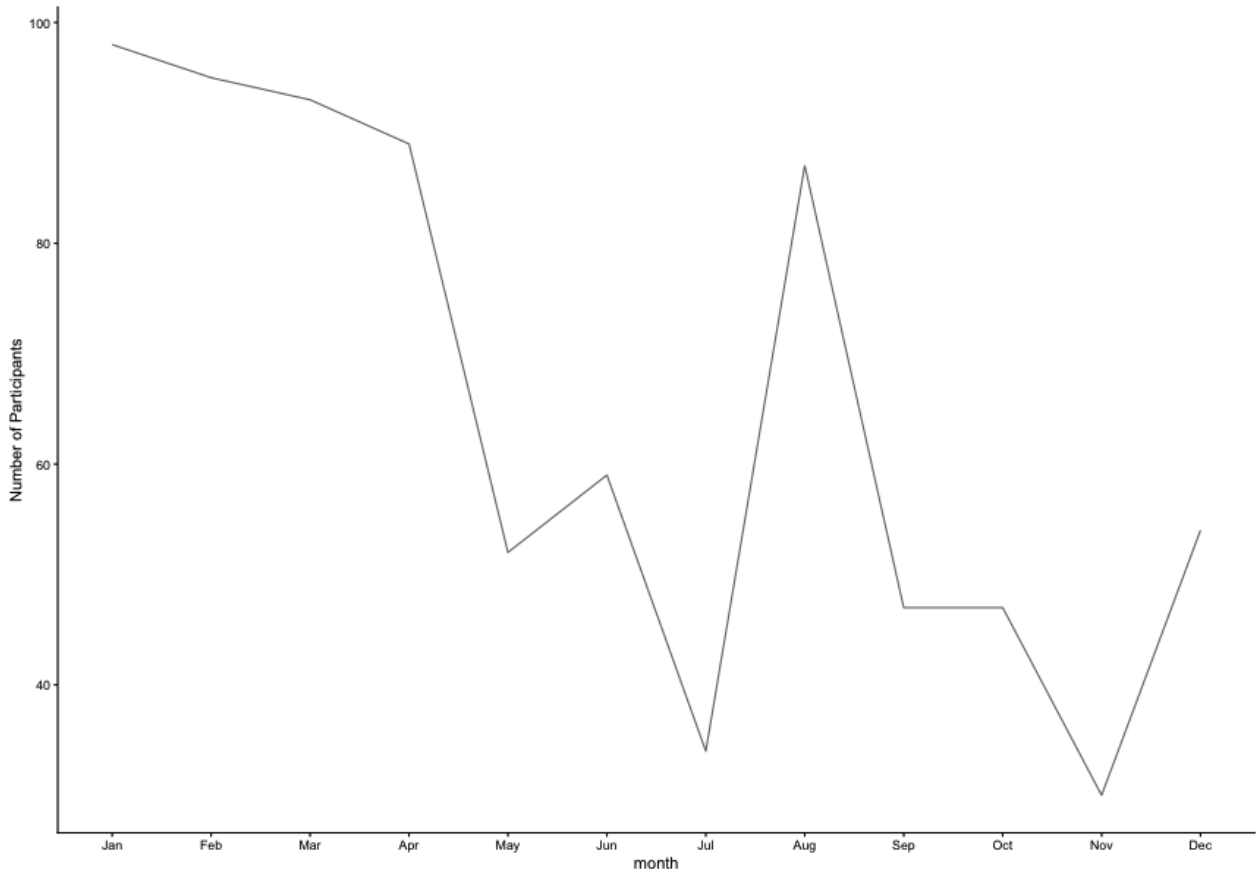


Figure 4-3. IHEA Count of Program Participants per Month, SPPC

4.3.2 Cross Participants

Cross-participants are treatment group members who also participated in another NV Energy DSM program. The Evaluator removed cross-participants from the regression analysis, except for the DI program, which is bundled with the IHEA program delivery, and for the upstream HES program, for which participants are not tracked. When a customer participates in an in-home energy assessment, they are typically offered energy efficient measures through the DI program at the same time. The DI program provides installation of measures such as light-emitting diode ("LED") lights, advanced power strips, and air filters. Since such a high percentage (85 percent) of IHEA participants receive the Direct Install measures at the same time, cross participants in the DI program were not removed from the regression analysis. The savings from this program were subtracted from the program level savings. Table 4-17 provides the breakdown of cross participation of 2025 IHEA participants in other programs.

Table 4-17. IHEA kWh Treatment Group Members in NV Energy's Other DSM Programs, SPPC

Other DSM Programs	Number of IHEA Participants in other DSM Programs	Percent of IHEA Participants in other DSM Programs†
IHEA only	63	8.0%
Low Income	23	3%
Home Energy Reports	39	5%
Online Assessments	32	4%
Direct Install	661	85%
Residential DR	364	47%
Residential Air Conditioning	1	<1%
Total IHEA Participants in Other Programs	**722**	**92%**

†*Customers can participate in more than 1 additional DSM program.*

4.3.3 Data Cleaning

Table 4-18 shows the data cleaning steps the Evaluator took, and the number of accounts left after each step to determine the data to be used in the model. The steps and rational for removing participants were based on whether they are cross-participants in other DSM programs, billing records were duplicates, estimates, or outliers, or participants had insufficient billing data to include in the panel regression analysis. Among the 235 accounts removed for insufficient billing data, 173 had fewer than 3 post-treatment bills. A description of the data cleaning steps is provided in Section 3.1.1.

Table 4-18. IHEA Participants Number of kWh Participants After Each Data Cleaning Step, SPPC

Cleaning Step	Treatment Participants Removed After Each Data Cleaning Step	Treatment Participants Remaining After Each Data Cleaning Step
DSM Central participant list	0	785
Remove Cross Participants (Except for Direct Install)	387	398
Remove Bill Records that are Estimates and Duplicates	15	384
Remove Outliers	5	379
Remove Accounts with Insufficient Billing Data	235	144
Number of Participants in Final Model:		**144**

4.3.4 Calculated Energy Savings (kWh)

Table 4-19 provides the results of the mixed-effects panel regression modeling that was performed on the data. For this analysis, the Evaluator considers these results to be statistically significant

because the absolute value of the t-value (3.39) output from the regression model is greater than 1.645, the z-score which corresponds to the 90 percent confidence level for a two-sided t-test. This shows a high likelihood that the difference between pre-period and post-period consumption is not zero, and that there is a savings trend.

Table 4-19. IHEA Results of kWh Mixed Effects Panel Regression Modeling, SPPC

Intercept (t-value)	**HDD65 (t-value)**	**CDD75 (t-value)**	**Post (t-value)**	**r-squared**
15.75 (10.21)	0.50 (14.29)	1.90 (16.67)	-1.14 (-3.39)	0.77

4.3.4.1 Savings Adjustments

Since IHEA participants in the DI program were not removed from the regression analysis for program year 2025, energy savings (kWh) attributed to DI cross-participants were subtracted from the total ex-post electric savings to avoid double counting of energy savings. Energy savings (kWh) estimated from cross-participant purchases of HES upstream measures were also subtracted from the total ex-post electric savings to avoid double counting of energy savings. The removed energy savings attributed to the DI program and estimated HES upstream cross-participation are shown in Table 4-20.

Additionally, customers who re-participate in the IHEA program within the EUL of their last in-home assessment require a savings adjustment. The within-EUL corrected program-level ex-post savings were determined using energy savings curves that are designed to calculate the portion of annual energy savings that occurs during each month of the year while accounting for the temporal nature of energy savings as well as project implementation dates. Please see Table 6-9 in Appendix A: Savings per Month by Rate Class for further details.

Table 4-20. Determining Annual IHEA kWh Savings per Participant, SPPC

Both IHEA and Direct Install	Daily Energy (kWh) Savings	1.14
	Annual Energy (kWh) Savings per Participant	416.10
	Count of Participants	785
	Annual Energy (kWh) Savings	326,639
Cross-Participants	Home Energy Saver Annual Energy (kWh) Savings	19,056
	Direct Install Annual Energy (kWh) Savings	126,736
IHEA only	Annual Energy (kWh) Savings per Participant	230.38
	Ex-post (kWh) Savings	180,847
Within-EUL Correction	Customers who received a 2025 IHEA within their last IHEA EUL	9
	Final Annual Energy (kWh) Savings per Participant	**225.41**
	Final Ex-post (kWh) Savings	**176,947**

Table 4-21 provides average annual kWh savings per participant, and program-level annual kWh savings for the 2025 In-Home Program. Final verified kWh savings for the IHEA program are defined as the within-EUL corrected ex-post savings (Table 4-20); annual kWh savings per household were calculated by dividing the within-EUL corrected program-level savings by the total number of IHEA participants.

Table 4-21. Summary of Annual IHEA kWh Savings, SPPC

Program	Daily Energy (kWh) Savings	Annual Energy (kWh) Savings per Participant	Number of Participants	kWh Savings
IHEA	0.62	225.41	785	176,947

Table 4-22 presents the total lifetime savings (kWh) for the SPPC IHEA program.

Table 4-22. Summary of Ex-post Verified kWh Savings for IHEA Participants, SPPC

Year	IHEA
2025	105,934
2026 (Estimated)	176,947
2027 (Estimated)	71,463
Total (Lifetime) Savings	**354,344**

4.3.5 Calculated Summer Critical Peak Demand Savings (kW)

Critical peak demand savings (kW savings) were calculated by month and by rate class, utilizing ex-post verified energy (kWh) savings that were disaggregated into 8,760 hourly bins with an appropriate program-level, 8,760-hour energy savings curve. The annual summer critical peak demand savings for this program are reported in Table 4-23.

Table 4-23. IHEA Summer Critical Peak Demand kW Savings, SPPC

Subprogram	Summer Critical Peak Demand Savings (kW)
IHEA	64.53

The complete table of ex-post verified critical peak demand (kW) savings by month and rate class are provided in Appendix A.

4.3.6 Participant Surveys

The Evaluator collected complete survey responses from 72 SPPC IHEA program participants who were able to recall receiving an In-Home Assessment during the 2025 program year. The survey tool is provided in Appendix D: Survey Instruments. An abbreviated summary of these survey responses is provided below.

Survey respondents had positive feedback regarding various aspects of their interactions with the Energy Advisor. Most respondents stated that the PowerShift Energy Advisor was punctual (83 percent), knowledgeable (82 percent), professional and courteous (89 percent), and clean and presentable (86 percent).

While most respondents were satisfied with their PowerShift Energy Advisors, a few expressed some dissatisfaction with their interactions. Some respondents disagreed that the advisor was punctual (10 percent), knowledgeable (13 percent), professional and courteous (7 percent), and clean and presentable (9 percent). Feedback included dissatisfaction with advisor knowledge on power saving measures and problems with incorrectly installed products.

Participants were largely pleased with aspects of the PowerShift bundled appointments. Most respondents noted the advisor discussed potential energy savings (91 percent) and inspected their HVAC system (74 percent). Fewer participants reported that the advisor inspected their appliances (72 percent) and were emailed an energy assessment report with energy efficiency recommendations (66 percent). Only 48 percent of respondents said that the advisor inspected their home's insulation.

Participants found the In-Home Energy Assessment with the PowerShift Energy Advisor informative and the energy saving tips clear. Most respondents found the In-Home Energy Assessment with the PowerShift Energy Advisor to be informative, with 36 percent of respondents finding it extremely informative and 34 percent finding it very informative. During the assessment, 72 percent of respondents reported learning valuable energy-saving tips for their homes. Most (91

percent) agreed that the information was either extremely or very clear. Additionally, 91 percent implemented energy-saving recommendations they received.

Survey participants made various behavior adjustments after their energy assessment and reflects a broad adoption of energy saving habits. After the energy assessment, participants most frequently turned off lights or ceiling fans when not in the room (91 percent), used their dishwasher or laundry machines only with full loads (85 percent), reduced the thermostat temperature in winter or increased it in summer (77 percent), and replaced air filters (77 percent). Other common actions included cleaning clothes dryer vent (73 percent), washing clothes in cold water (70 percent), letting dishes air dry (63 percent), reduced shower time (49 percent), vacuuming refrigerator coils (47 percent), and tuning up air conditioning or heating system (48 percent). Less frequent actions included using a portable fan instead of air conditioning (38 percent), lowering water temperature (38 percent), adjusting freezer or refrigerator temperature settings (36 percent) and checking heating or cooling ducts for leaks (34 percent). Installing energy efficient appliances (31 percent) and unplugging a second refrigerator or freezer (9 percent) were the least commonly reported actions.

Most participants did not receive any PowerShift rebates for appliance purchases. Eighty-seven percent of respondents said they did not receive any rebates for appliance purchases. The most frequently reported rebates received were for ENERGY STAR certified refrigerators (8 percent), ENERGY STAR certified clothes washers (7 percent), and ENERGY STAR certified clothes dryers (7 percent). Fewer respondents reported receiving rebates on ENERGY STAR certified room air conditioners (5 percent), advanced power strips (5 percent) and ENERGY STAR certified air purifiers (3 percent).

Saving on utility bills was a primary motivator for participation in the IHEA. Participants joined the PowerShift In-Home Energy Assessment mainly to save money on energy bills (35 percent), to improve their home's energy efficiency (20 percent), and because NV Energy provided it for free (17 percent). Some respondents mentioned additional motivations such as being recommended to do so by NV Energy representatives and friends, to get free thermostats and because of frustration over high energy bills.

Most participants requested the PowerShift In-Home Energy Assessment online or by phone. Most respondents requested their PowerShift In-Home Energy Assessment by signing up on NV Energy's website (50 percent) or by calling NV Energy directly (37 percent).

Feedback on the PowerShift In-Home Energy Assessment identified some areas of improvement. Forty-eight percent of participants indicated that there are no improvements needed. The most frequently noted areas of improvement included installing more energy-saving items during the visit (25 percent), greater follow-up with additional resources and support (20 percent), a more thorough inspection of their home (17 percent), and offering a more detailed report with actionable steps (13 percent).

The PowerShift program successfully reached participants through diverse channels, with notable percentages from NV Energy emails. The PowerShift program reached participants through various channels, with 63 percent hearing about it through NV Energy emails, 12 percent

through previous experience with NV Energy's energy efficiency programs, and 8 percent via social media. Other channels included through internet searches, television commercials, the PowerShift Smart Shop online marketplace, and through their bill.

Customer satisfaction levels for various aspects of the PowerShift program were generally high. A combined 85 percent of respondents reported being satisfied (very or somewhat) with the information received from their PowerShift Energy Advisor and 81 percent reported being overall satisfied with the In-Home Energy Assessment. 78 percent of respondents expressed satisfaction with NV Energy's PowerShift products and services, and with their satisfaction with NV Energy as a service provider, while 77 percent were satisfied with the performance of the items installed. Most respondents (88 percent) found the sign-up process for a visit from the PowerShift Energy Advisor to be very or somewhat easy. Suggestions for improving the sign-up process include improving advisor availability.

4.4 SPPC Online Energy Assessments

4.4.1 Treatment Participants

Figure 4-4 on the following page shows the number of participants per month for the OEA program. As seen in the figure, the highest participation was in January, followed by the summer months of July.

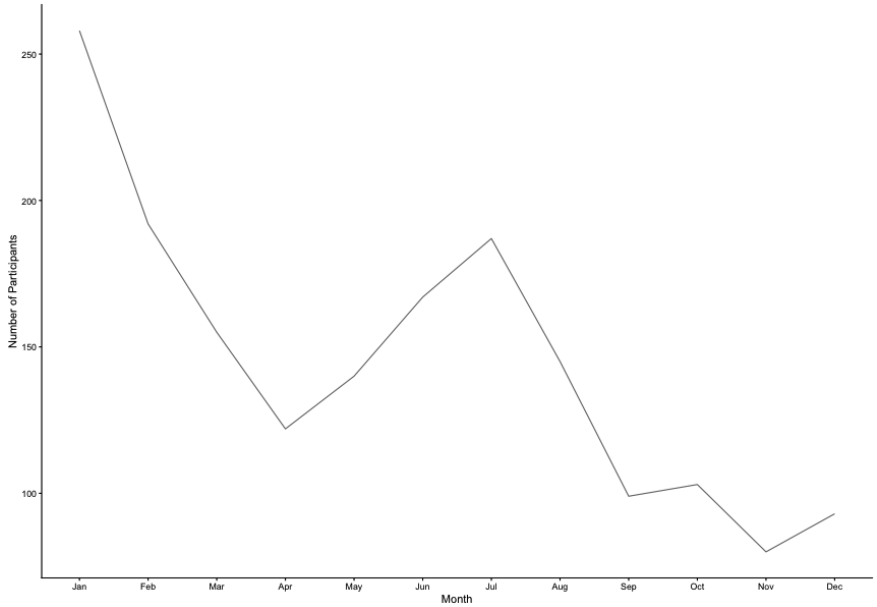


Figure 4-4. OEA Count of Program Participants per Month, SPPC

4.4.2 Cross Participants

The Evaluator removed cross-participants from the regression analysis. Cross-participants are treatment group members who also participated in another downstream NV Energy DSM program

or programs. Downstream programs are programs in which the participants are known. Table 4-24 shows that there were 405 unique cross-participants, or 25 percent of the OEA participants.

Table 4-24. OEA kWh Treatment Group Members in NV Energy's Other DSM Programs, SPPC

Other DSM Programs	Number of OEA Treatment Participants in other DSM Programs	Percent of OEA Participants in other DSM Programs[†]
OEA only	1,312	75%
Home Energy Reports	168	10%
IHEA	32	2%
Low Income	3	<1%
Residential DR	255	15%
Direct Install	24	1%
Residential Air Conditioning	4	<1%
Total OEA Participants in Other Programs	**405**	**25%**

[†]*Customers can participate in more than 1 additional DSM program.*

4.4.3 Data Cleaning

Table 4-25 shows the data cleaning steps the Evaluator took, and the number of accounts left after each step to determine the data to be used in the model. The steps and rational for removing participants were based on whether they are cross-participants in other DSM programs, billing records were duplicates, estimates, or outliers, or participants had insufficient billing data to include in the panel regression analysis. Among the 872 accounts removed for insufficient billing data, 646 had fewer than 3 post-treatment bills. A description of the data cleaning steps is provided in Section 3.1.1.

Table 4-25. OEA kWh Participants Number of Participants After Each Data Cleaning Step, SPPC

Cleaning Step	Treatment Participants Removed After Each Data Cleaning Step	Treatment Participants Remaining After Each Data Cleaning Step
DSM Central participant list	0	1,717
Remove Cross Participants	405	1,312
Remove Bill Records that are Estimates and Duplicates	0	1,312
Remove Outliers	6	1,306
Remove Accounts with Insufficient Billing Data	872	434
Number of Participants in Final Model:		**434**

4.4.4 Calculated Energy Savings (kWh)

Table 4-26 provides the results of the mixed-effects panel regression modeling that was performed on the data. The Evaluator considers these results to be statistically significant because the absolute value of the t-value (1.76) output from the regression model is greater than 1.645, the z-score which corresponds to the 90 percent confidence level for a two-sided t-test. This shows a high likelihood that the difference between pre-period and post-period consumption is not zero, and that there is a consistent savings trend.

Table 4-26. OEA Results of kWh Mixed Effects Panel Regression Modeling, SPPC

Intercept (t-value)	HDD65 (t-value)	CDD75 (t-value)	Post (t-value)	r-squared
17.46 (22.06)	0.52 (46.61)	1.73 (66.96)	-0.52 (-1.76)	0.74

4.4.4.1 Savings Adjustments

Since HES upstream participants were not known and therefore could not be removed from the regression analysis for program year 2025, energy savings (kWh) attributed to HES cross participants were subtracted from the total ex-post savings to avoid double counting. The total estimated HES cross-participant savings are reported in Table 4-27.

Additionally, customers who re-participate in the OEA program within the EUL of their last online energy assessment require a savings adjustment. The within-EUL corrected program-level ex-post savings were determined using energy savings curves that are designed to calculate the portion of annual energy savings that occurs during each month of the year while accounting for the temporal nature of energy savings as well as project implementation dates. Please see Table 6-2 in Appendix A: Savings per Month by Rate Class for further details.

Table 4-27. Determining OEA Annual Energy Savings per Participant, SPPC

OEA	Daily Energy (kWh) Savings	0.52
	Annual Energy (kWh) Savings per Participant	189.88
	Count of Participants	1,717
	Annual Energy (kWh) Savings	326,024
Cross-Participants	Home Energy Saver Annual Energy (kWh) Savings	17,555
OEA only	Annual Energy (kWh) Savings per OEA Participant	179.66
	Ex-post (kWh) Savings Adjusted for Bundled Programs	308,469
Within-EUL Correction	Customers who took a 2025 OEA within their last OEA EUL	132
	Final Annual Energy (kWh) Savings per Participant	**173.34**
	Final Ex-post (kWh) Savings	**297,625**

Table 4-28 provides average annual kWh savings per participant, and program-level annual kWh savings for the 2025 OEA subprogram. Verified kWh savings for the treatment groups were determined by applying the daily average per household kWh savings value calculated from the regression model to the total number of OEA participants.

Table 4-28. Summary of Annual OEA kWh Savings, SPPC

Program	Daily Energy (kWh) Savings	Annual Energy (kWh) Savings per Participant	Number of Participants	kWh Savings
OEA	0.47	173.34	1,717	297,625

Table 4-30 below presents the total lifetime savings (kWh) for the SPPC OEA program.

Table 4-29. Summary of Ex-post Verified kWh Savings for OEA Participants, SPPC

Year	OEA
2025	179,652
2026 (Estimated)	117,973
Total (Lifetime) Savings	**297,625**

4.4.5 Calculated Summer Critical Peak Demand Savings (kW)

Critical peak demand savings (kW savings) were calculated by month and by rate class, utilizing ex-post verified energy (kWh) savings that were disaggregated into 8,760 hourly bins with an appropriate program-level, 8,760-hour energy savings curve. The annual summer critical peak demand savings for this program are reported in Table 4-30.

Table 4-30. OEA Summer Critical Peak Demand kW Savings, SPPC

Subprogram	Summer Critical Peak Demand kW Savings
OEA	75.40

4.4.6 Participant Surveys

4.4.6.1 Completed OEA

The Evaluator collected survey responses from 63 SPPC OEA program participants who recalled completing an OEA during the 2025 program year. The survey tool is provided in Appendix D: Survey Instruments. The following summarizes the participants' experiences with the OEA, along with valuable insights for improvement and increased user satisfaction.

Sources of OEA Awareness Among Participants. The majority of OEA participants (68 percent) learned about it through the NV Energy website (MyAccount), followed by 17 percent through NV Energy emails as highlighted in Table 4-31.

Table 4-31. OEA Participant Sources of Program Awareness

Source	Percent (n=60)
NV Energy website (MyAccount)	68%
NV Energy email	17%
NV Energy inserts/printed messages on bills	7%
Internet search	2%
Other sources	5%
Don't know	1%

Participants' Motivations for Taking OEA. The primary reason participants completed the Online Energy Assessment was to learn how to save energy and reduce their bills (40 percent). Other motivations included to better understand their home's energy usage (25 percent), out of curiosity or interest in energy efficiency (13 percent), to see if they qualified for energy-saving products or rebates (8 percent), comparing usage with similar households (5 percent), and various other reasons (8 percent), such as the utility providing the assessment for free, environmental reasons, and frustration with high bills.

OEA Participation and Ease. Participants mainly reviewed their home's energy usage (74 percent), followed by questions about appliances (57 percent), heating and cooling equipment (52 percent), water heaters (44 percent), lighting (39 percent), and smart thermostats (37 percent). Most found the Online Energy Assessment very easy (24 percent) or somewhat easy (43 percent) to complete. Twenty-two percent rated it neutral, while 4 percent found it difficult (2 percent somewhat difficult and 2 percent very difficult) and 7 percent were unsure.

Energy-Saving Tips from OEA. The most frequently provided recommendations from the Online Energy Assessment were no-cost or low-cost methods for conserving energy (52 percent), followed by tips specific to seasonal energy savings (38 percent), and energy saving measures that may be cost-justified for my home (32 percent). Other recommendations included tips that require an upfront investment or purchase and information about rebates or incentives for energy efficient upgrades.

Impact of Energy-Saving Tips from OEA. Sixty-eight percent of respondents agreed that the OEA helped them to understand how they use energy at home, 65 percent agreed that they learned something new, 63 percent agreed that they have become aware of areas that they could be more energy efficient. Other impacts that participants agreed on included that the contents of the OEA website were interesting (60 percent), they received recommendations that they could not implement (50 percent), and the recommendations were practical for their home (49 percent). Forty-two percent of participants agreed that the recommendations aligned with their budget and 33 percent agreed they reduced their energy bill because of the tips and recommendations from the OEA.

Energy-Saving Activities Post-OEA. Participants engaged in various energy-saving activities in 2025, such as replacing air filters, checking heating and cooling ducts, vacuuming fridge coils, adjusting thermostat temperatures, tuning up HVAC systems, and more. Below are the percentage of participants who said that they performed each activity in 2025.

- Replaced air filters: 86 percent
- Checked heating/cooling ducts for leaks: 50 percent
- Vacuumed refrigerator coils: 39 percent
- Tuned-up HVAC system: 76 percent
- Cleaned dryer vent: 65 percent
- Lowered water heater setting: 32 percent
- Adjusted fridge/freezer settings: 49 percent
- Unplugged second fridge/freezer: 21 percent
- Installed energy efficient appliances: 49 percent
- Reduced thermostat in winter / Increased in summer: 87 percent
- Used dishwasher or laundry only with full loads: 85 percent

- Turned off lights or ceiling fans when not in room: 95 percent
- Washed clothes in cold water: 68 percent
- Used a portable fan instead of air conditioning: 59 percent
- Let dishes air dry: 72 percent
- Reduced shower time: 43 percent

Impact on Energy Bills. Almost a third of the participants (32 percent) reported lower energy bills after changes from the Online Energy Assessment. However, 48 percent saw no change, 5 percent saw an increase, and 11 percent found it too early to tell. Participants who saw a decrease in their energy bill showed varying satisfaction levels with their energy bill savings after changes. Overall, 71 percent were satisfied (14 percent very satisfied, 57 percent satisfied), 21 percent were very dissatisfied and 7 percent were neutral.

Utilization of PowerShift Rebates. Most respondents (96 percent) reported not receiving appliance rebates from NV Energy. Two percent of respondents reported receiving a rebate on an advanced power strip, and two percent reported receiving a rebate on an ENERGY STAR certified refrigerator. Other reported rebates include ENERGY STAR certified clothes dryer (2 percent), ENERGY STAR certified clothes washer (4 percent) and ENERGY STAR certified air purifier (1 percent). All respondents who received a rebate did so because of the OEA.

Overall Satisfaction with OEA. The Online Energy Assessment received positive feedback from most respondents, with 77 percent reporting they were either very or somewhat satisfied. Additionally, 75 percent expressed satisfaction with the information, tips, and recommendations provided by the OEA, and 70 percent were satisfied with the time required to complete it. However, some expressed dissatisfaction with the lack of meaningful recommendations, and lack of financial support for the recommendations.

Recommendations for OEA Improvement. Some participants suggested providing more recommendations for rental properties, apartments and older homes, and more personalized results. One participant suggested being able to see a graph of daily use in 15-minute increments to help inform decisions. Others suggested offering more incentives for customers to take action from the recommendations.

4.4.6.2 Participants who Partially Completed OEA

The Evaluator collected survey responses from 45 SPPC OEA program participants who recalled taking an OEA during the 2025 program year but did not complete it. The survey tool is provided in Appendix D: Survey Instruments. The following summarizes the participants' experiences with the OEA, along with valuable insights for improvement and increased user satisfaction.

Sources of OEA Awareness Among Participants. The majority of OEA participants (58 percent) learned about it through the NV Energy website (MyAccount), followed by 24 percent through NV Energy emails as highlighted in Table 4-32. OEA Participant Sources of Program AwarenessTable 4-32.

Table 4-32. OEA Participant Sources of Program Awareness

Source	Percent (n=45)
NV Energy website (MyAccount)	58%
NV Energy email	24%
NV Energy inserts/printed messages on bills	9%
Other sources	7%
Don't know	2%

Participants' Motivations for Taking OEA. The primary reason participants completed the Online Energy Assessment was to learn how to save energy and reduce their bills (42 percent). Other motivations included to better understand their home's energy usage (22 percent), out of curiosity or interest in energy efficiency (18 percent) and various other reasons (18 percent), such as to see if they qualified for energy-saving products or rebates, comparing usage with similar households, the utility providing the assessment for free, environmental reasons, and frustration with high bills.

OEA Participation and Ease. Participants mainly reviewed their home's energy usage (79 percent), followed by questions about appliances (77 percent), heating and cooling equipment (60 percent), water heaters (58 percent), lighting (51 percent), and home characteristics (47 percent). Most found the Online Energy Assessment somewhat easy (30 percent), very easy (28 percent) or neutral (28 percent) to complete. Four percent found it difficult (2 percent somewhat difficult and 2 percent very difficult) and 9 percent were unsure. Common complaints were that there were some confusing questions, and they couldn't answer some questions due to a lack of information.

Energy-Saving Tips from OEA. The most frequently provided recommendations from the Online Energy Assessment were no-cost or low-cost methods for conserving energy (61 percent), followed by tips that require an upfront investment or purchase (41 percent), tips specific to seasonal energy savings (34 percent), and energy saving measures that may be cost-justified for my home (32 percent). Other recommendations included information about rebates or incentives for energy-efficient upgrades.

Impact of Energy-Saving Tips from OEA. Seventy-six percent of respondents agreed that the contents of the OEA website are interesting, 68 percent agreed that the information helped them understand how they use energy at home, 64 percent agreed that they have become aware of areas that they could be more energy efficient, and 58 percent agreed that the assessment made recommendations they were not able to implement. Other impacts that participants agreed on included that the energy saving recommendations were practical for their home (57 percent), and they learned something new from the assessment (49 percent). Forty-three percent of participants agreed that the recommendations aligned with their budget, and 38 percent agreed they reduced their energy bill because of the tips and recommendations from the OEA.

Energy-Saving Activities Post-OEA. Participants engaged in various energy-saving activities in 2025, such as replacing air filters, checking heating and cooling ducts, vacuuming fridge coils,

adjusting thermostat temperatures, tuning up HVAC systems, and more. Below are the percentage of participants who said that they performed each activity in 2025.

- Replaced air filters: 71 percent
- Checked heating/cooling ducts for leaks: 27 percent
- Vacuumed refrigerator coils: 45 percent
- Tuned-up HVAC system: 50 percent
- Cleaned dryer vent: 71 percent
- Lowered water heater setting: 45 percent
- Adjusted fridge/freezer settings: 44 percent
- Unplugged second fridge/freezer: 25 percent
- Installed energy efficient appliances: 36 percent
- Reduced thermostat in winter / Increased in summer: 73 percent
- Used dishwasher or laundry only with full loads: 81 percent
- Turned off lights or ceiling fans when not in room: 87 percent
- Washed clothes in cold water: 66 percent
- Used a portable fan instead of air conditioning: 67 percent
- Let dishes air dry: 55 percent
- Reduced shower time: 47 percent

Impact on Energy Bills. Twenty-nine percent of the participants reported lower energy bills after changes from the Online Energy Assessment. However, 45 percent saw no change, no participants saw an increase, and 19 percent found it too early to tell. Participants who saw a decrease in their energy bill were generally positive with their energy bill savings after changes. Overall, 78 percent were satisfied (56 percent very satisfied, 22 percent satisfied), 22 percent were neutral, and no participants reported being dissatisfied.

Utilization of PowerShift Rebates. Most respondents (91 percent) reported not receiving appliance rebates from NV Energy. Six percent of respondents reported receiving a rebate on an ENERGY STAR certified refrigerator, 3 percent on an ENERGY STAR certified clothes dryer, 3 percent on an ENERGY STAR certified clothes washer and 3 percent on an advanced power strip. None of the respondents who received a rebate did so because of the OEA.

Overall Satisfaction with OEA. The Online Energy Assessment received positive feedback from most respondents, with 64 percent reporting they were either very or somewhat satisfied. Additionally, 64 percent expressed satisfaction with the information, tips, and recommendations provided by the OEA, and 70 percent were satisfied with the time required to complete it.

However, some expressed dissatisfaction with the time needed to complete the assessment, tips not being cost effective, and that electric vehicle charging was not being detected correctly.

Recommendations for OEA Improvement. Some participants suggested identifying whether a customer is in a house or apartment to determine relevant recommendations and that many recommendations are either expensive, or too basic if low cost. One participant suggested adding radon fans to the appliance list, as they've noticed a significant increase in their bills after installing the system and are looking for ways to reduce this. Others suggested providing more information about rebate eligibility and providing more incentives to assist with switching to solar power.

5 CONCLUSIONS AND RECOMMENDATIONS

This chapter presents conclusions and recommendations.

5.1 Conclusions

NV Energy offers two opt-in home energy assessment services to residential customers. These services are the 1) In-Home Energy Assessment and 2) Online Energy Assessment. Savings for each service are calculated separately.

The ex-post annual energy (kWh) savings for the NPC energy assessment programs totaled 2,680,566 kWh, of which the IHEA program achieved 1,539,280 kWh of energy savings and the OEA program achieved energy savings of 1,141,286 kWh. The NPC IHEA program achieved a summer critical peak demand reduction of 561.33 kW and the NPC OEA program achieved a summer critical peak demand reduction of 307.11 kW.

In the SPPC service territory, the energy assessment programs produced a total ex-post verified energy savings of 474,572 kWh, of which the IHEA program achieved energy savings of 176,947 kWh and the OEA program achieved energy savings of 297,625 kWh. The SPPC IHEA program achieved a summer critical peak demand reduction of 64.53 kW and the SPPC OEA program achieved a summer critical peak demand reduction of 75.40 kW.

5.2 Discussion

The annual energy savings per IHEA participant for 2025 were 322 kWh for NPC and 225 kWh for SPPC. These savings are lower than the 2024 value for NPC (452 kWh) and higher than the 2024 value for SPPC (207 kWh), but remain within the range of past 3 years. The savings during 2022-2024 ranged between 70-452 kWh for NPC and 181-479 kWh for SPPC. The average savings over the last 3 program years were 293 kWh and 289 kWh for NPC and SPPC, respectively. Realization rates were relatively high in 2025, 141 percent for NPC and 213 percent for SPPC, when compared with ex-ante savings that are based on multiple-year average savings. Contributing factors likely include conservative ex-ante assumptions and effective implementation, on the part of participants, of recommended measures and savings tips. Increasing customer satisfaction with the program may have reinforced these outcomes: NPC satisfaction reached 84 percent in 2025, up from 80 percent in 2023-2024, while SPPC satisfaction rose to 81 percent in 2025, compared with 72 percent in 2024 and 60 percent in 2023.

The annual average energy savings per OEA participant in 2025 were 186 kWh for NPC and 173 kWh for SPPC, with realization rate as 105 percent and 81 percent, respectively. For NPC, these savings fall within the 2022-2024 range (0-438 kWh), which had an average annual savings of 194 kWh. For SPPC, the 2025 savings are lower than the 2022-2024 range (234–361 kWh) but remain within the broader five-year range observed from 2020 to 2024 (0-361 kWh).

One notable change in this year’s evaluation is the inclusion of customers who did not fully complete the OEA assessment (leaving one or two optional questions unanswered). However, their savings did not differ significantly from those of customers who completed the assessment.

Customer survey results for both territories further support the similarity between groups. The proportion of customers reporting noticeable bill reductions was similar between groups: 35 percent (completed) vs. 42 percent (incomplete) for NPC, and 32 percent (completed) vs. 29 percent (incomplete) for SPPC. While this expanded inclusion improves representativeness, it may also contribute to greater variability in overall savings estimates.

5.3 Status of 2024 Recommendations

Table 5-1 on the following page provides a summary of recommendations made in the previous program year's M&V report and the current status and applicable notes describing how these recommendations were incorporated into the management and operation of the program during 2025.

Table 5-1. Recommendations from the 2024 Energy Assessments M&V Report

Program	2024 M&V Report Recommendation	Status in 2025
IHEA	Enhance the thoroughness of assessments	No definitive changes to the program completed related to these recommendations. These recommendations continue to be valid for consideration in future program years.
IHEA, OEA	Address scheduling and accessibility issues	
IHEA, OEA	Improve follow-up and communication	
IHEA, OEA	Increase customer awareness and education	
IHEA, OEA	Strengthen incentives and program benefits	
OEA	Simplify and personalize the assessment	

5.4 Recommendations

The recommendations from the 2024 evaluation remain applicable and continue to address core program design and delivery. The opportunities below reflect new or more prominent themes identified in 2025 participant survey responses.

- **Provide More Tailored Recommendations for Renters, Apartments, and Different Home Types** This recommendation is driven by multiple participant comments noting that results did not always reflect their housing situations. Respondents specifically asked for more relevant guidance for rental properties, apartments, and older homes, and suggested that the assessment better distinguish between houses and apartments to avoid recommendations that are impractical or outside a tenant's control.

  Modify assessment logic to identify early whether participants live in single-family homes, apartments, rental properties, or older homes. Use this information to filter and prioritize recommendations that are feasible for each situation. Develop specific guidance for renters, including low-cost and portable measures, and provide materials customers can share with landlords or property managers when upgrades require owner approval.

- **Expand Content on Solar Energy, EV Charging, and Other Emerging Energy Uses** Several participants requested additional information about solar power, including options for apartment complexes, and asked for guidance related to electric vehicle charging. These comments indicate growing customer interest in newer energy technologies that are not yet consistently addressed in assessment results or educational materials.

  Update assessment content and educational materials to include clearer information on solar energy options (including community or shared solar where individual installation is not feasible), electric vehicle charging considerations, and other high-consumption equipment. Where applicable, integrate these topics into recommendation outputs rather than limiting them to general education sections.

- **Clarify Rebates and Strengthen Incentive Messaging** Participants asked for more information about rebates for energy-efficient appliances, solar-related incentives, and general eligibility for financial support. These responses suggest that while incentives exist, customers may not clearly understand what is available to them or how recommendations connect to specific rebate opportunities.

  Present rebate and incentive information alongside each relevant recommendation rather than in separate sections. Clearly indicate eligibility considerations and next steps for applying. Where possible, provide direct links or references to participating programs to make it easier for customers to act on recommendations.

- **Improve Use of Energy Data to Support Customer Decision-Making** A subset of respondents expressed interest in seeing more detailed energy-use information, such as graphs showing usage patterns (e.g., daily or short-interval data) or comparisons with prior assessments. This feedback indicates that some customers want more data-driven insights to help them better understand and act on energy-saving opportunities.

  Improve how energy-use information is presented within the assessment results. Where data are available, incorporate clearer visual summaries of usage patterns and highlight how recommended actions may influence consumption. Consider enabling comparisons over time for returning participants to help illustrate progress and reinforce behavior change.

6 APPENDIX A: SAVINGS PER MONTH BY RATE CLASS

This appendix provides monthly savings by rate class during 2025 for both the NPC and SPPC In-Home Energy Assessments and Online Energy Assessments programs. The Evaluator uses energy savings curves that are designed to describe the temporal nature of energy savings to calculate the portion of annual energy savings that occurs during each month of the year. The energy savings curves were coupled with project implementation dates on a record-by-record basis to produce accurate determinations of the energy savings achieved for each month of the year. Because of this, energy (kWh) savings during the first year can appear low in the first few months of the year, if only a few participants had engaged with the program over that period of time.

6.1 NPC Savings per Month by Rate Class

6.1.1 IHEA

Table 6-1. NPC IHEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2025

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	3,316	9,292	16,718	27,387	56,918	101,619	144,845	148,673	134,717	93,417	70,781	87,313	894,994
Total	**3,316**	**9,292**	**16,718**	**27,387**	**56,918**	**101,619**	**144,845**	**148,673**	**134,717**	**93,417**	**70,781**	**87,313**	**894,994**

[†]*Totals may not sum exactly due to rounding. Same for subsequent tables.*

Table 6-2. NPC IHEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2026

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	87,228	72,868	75,133	82,521	126,309	190,884	238,533	214,837	177,273	109,725	75,143	88,827	1,539,280
Total	**87,228**	**72,868**	**75,133**	**82,521**	**126,309**	**190,884**	**238,533**	**214,837**	**177,273**	**109,725**	**75,143**	**88,827**	**1,539,280**

Table 6-3. NPC IHEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2027

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	84,274	63,353	58,676	55,995	70,154	91,637	93,583	67,332	42,316	16,310	4,506	1,642	649,778
Total	**84,274**	**63,353**	**58,676**	**55,995**	**70,154**	**91,637**	**93,583**	**67,332**	**42,316**	**16,310**	**4,506**	**1,642**	**649,778**

Table 6-4. NPC IHEA Summer Critical Peak Demand (kW) Savings per Month by Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RS	166.55	149.88	180.20	194.48	397.27	509.66	561.33	515.95	535.89	335.47	133.55	153.65
Total	**166.55**	**149.88**	**180.20**	**194.48**	**397.27**	**509.66**	**561.33**	**515.95**	**535.89**	**335.47**	**133.55**	**153.65**

6.1.2 OEA

Table 6-5. NPC OEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2025

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	3,787	8,423	13,094	19,447	37,352	73,140	109,951	120,279	107,293	70,965	53,218	65,251	682,199
Total	**3,787**	**8,423**	**13,094**	**19,447**	**37,352**	**73,140**	**109,951**	**120,279**	**107,293**	**70,965**	**53,218**	**65,251**	**682,199**

Table 6-6. NPC OEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2026

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	60,981	45,273	42,641	42,355	56,678	71,372	65,286	40,588	22,101	8,306	2,899	606	459,086
Total	**60,981**	**45,273**	**42,641**	**42,355**	**56,678**	**71,372**	**65,286**	**40,588**	**22,101**	**8,306**	**2,899**	**606**	**459,086**

Table 6-7. NPC OEA Summer Critical Peak Demand (kW) Savings per Month by Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RS	122.70	97.71	98.68	100.76	170.60	208.02	267.00	307.11	322.03	217.45	96.17	113.55
Total	**122.70**	**97.71**	**98.68**	**100.76**	**170.60**	**208.02**	**267.00**	**307.11**	**322.03**	**217.45**	**96.17**	**113.55**

6.2 SPPC Savings per Month by Rate Class

6.2.1 IHEA

Table 6-8. SPPC IHEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2025

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D-1	907	2,403	3,796	4,731	6,038	8,193	14,197	14,897	12,756	9,972	12,714	15,331	105,934
Total	**907**	**2,403**	**3,796**	**4,731**	**6,038**	**8,193**	**14,197**	**14,897**	**12,756**	**9,972**	**12,714**	**15,331**	**105,934**

Table 6-9. SPPC IHEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2026

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D-1	10,027	8,376	8,637	9,486	14,520	21,943	27,420	24,696	20,378	12,613	8,638	10,211	176,947
Total	**10,027**	**8,376**	**8,637**	**9,486**	**14,520**	**21,943**	**27,420**	**24,696**	**20,378**	**12,613**	**8,638**	**10,211**	**176,947**

Table 6-10. SPPC IHEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2027

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D-1	13,943	10,490	8,640	6,588	5,803	5,905	7,940	5,721	3,036	1,653	1,221	524	71,463
Total	**13,943**	**10,490**	**8,640**	**6,588**	**5,803**	**5,905**	**7,940**	**5,721**	**3,036**	**1,653**	**1,221**	**524**	**71,463**

Table 6-11. SPPC IHEA Summer Critical Peak Demand (kW) Savings per Month by Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
D-1	19.02	17.23	20.71	21.87	35.25	58.59	64.53	59.31	61.60	34.87	25.82	31.31
Total	**19.02**	**17.23**	**20.71**	**21.87**	**35.25**	**58.59**	**64.53**	**59.31**	**61.60**	**34.87**	**25.82**	**31.31**

6.2.2 OEA

Table 6-12. SPPC OEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2025

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D-1	2,100	4,568	6,398	7,386	9,168	13,281	24,632	25,758	21,218	17,123	21,772	26,247	179,652
Total	**2,100**	**4,568**	**6,398**	**7,386**	**9,168**	**13,281**	**24,632**	**25,758**	**21,218**	**17,123**	**21,772**	**26,247**	**179,652**

Table 6-13. SPPC OEA Energy (kWh) Savings per Month by Rate Class, Calendar Year 2026

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D-1	22,777	17,026	14,417	11,572	10,699	10,606	12,844	8,670	4,784	2,430	1,776	372	117,973
Total	**22,777**	**17,026**	**14,417**	**11,572**	**10,699**	**10,606**	**12,844**	**8,670**	**4,784**	**2,430**	**1,776**	**372**	**117,973**

Table 6-14. SPPC OEA Summer Critical Peak Demand (kW) Savings per Month by Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
D-1	50.70	38.57	31.61	24.81	26.57	51.05	75.40	75.22	83.78	35.43	44.14	53.26
Total	**50.70**	**38.57**	**31.61**	**24.81**	**26.57**	**51.05**	**75.40**	**75.22**	**83.78**	**35.43**	**44.14**	**53.26**

7 APPENDIX B: EXAMPLE ONLINE ASSESSMENT

The following images are screen-captures demonstrating customer access points for the OEA program. Only one set of photos are included since the customer experience accessing the online tool does not differ between NPC and SPPC customers.

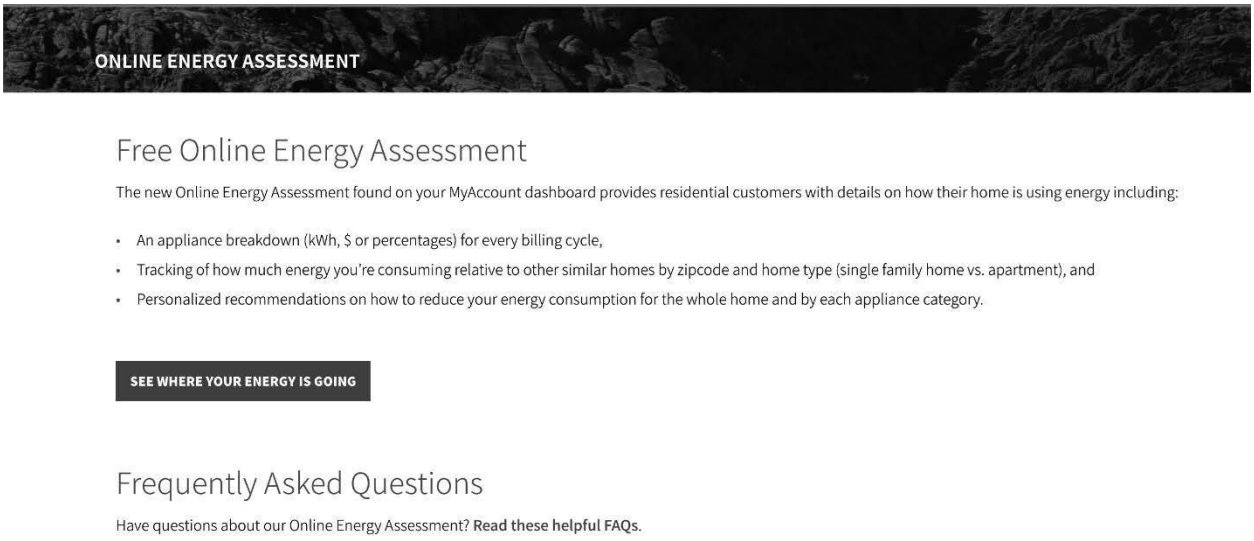


Figure 7-1. Entry Page for Online Energy Assessment Tool, from MyAccount

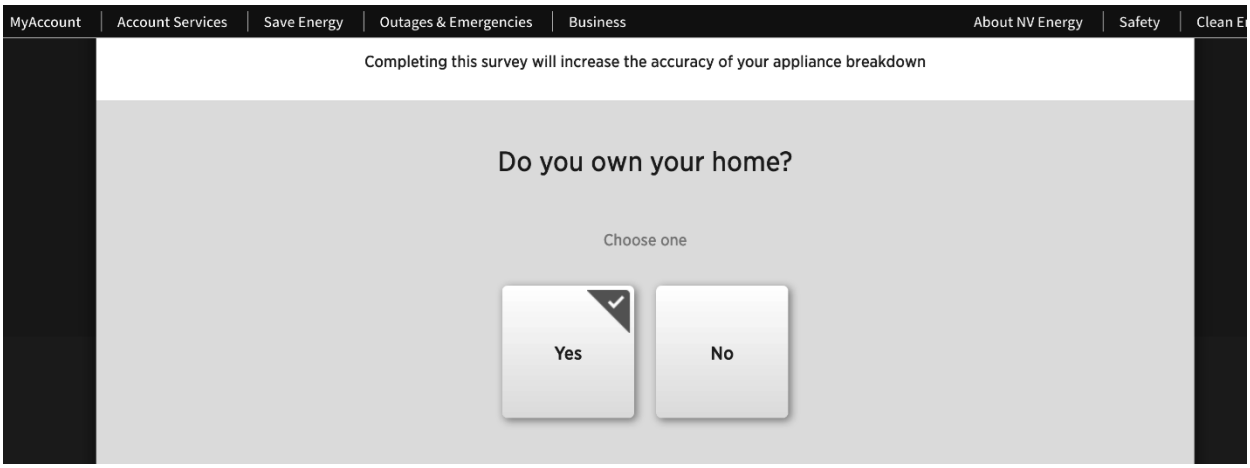


Figure 7-2. Question Example from the Home Profile Survey

8 APPENDIX C: GEOGRAPHIC DISTRIBUTION

8.1 NPC Participant Distribution Maps

This appendix section provides maps that show the geographic distribution of energy assessments in southern Nevada during 2025.

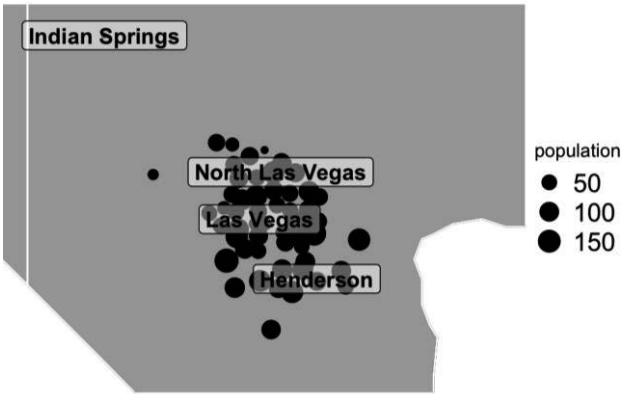


Figure 8-1. NPC IHEA Distribution Map

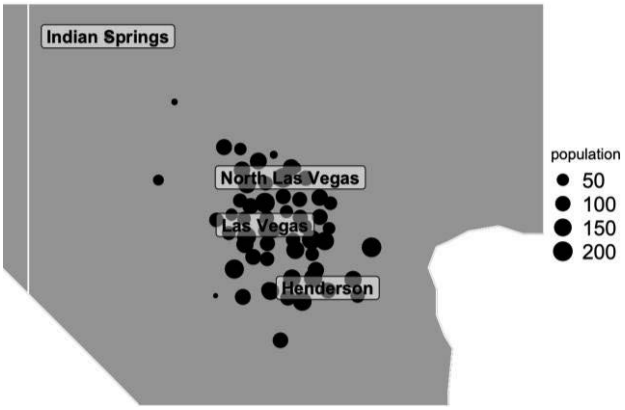


Figure 8-2. NPC OEA Distribution Map

8.2 SPPC Participant Distribution Maps

This appendix section provides maps that show the geographic distribution of energy assessments in northern Nevada during 2025.

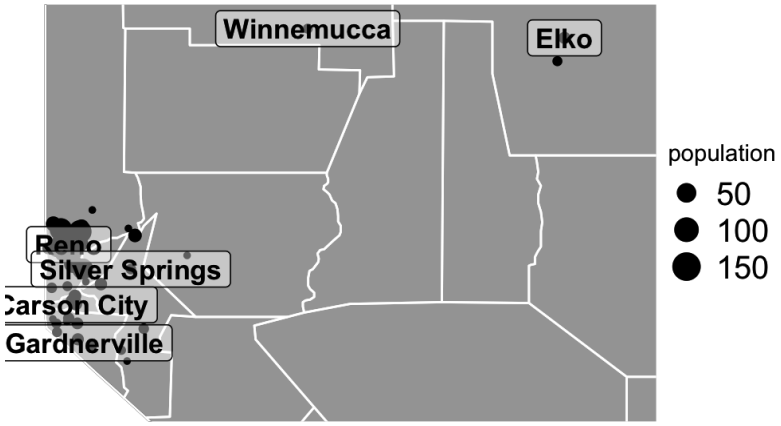


Figure 8-3. SPPC IHEA Distribution Map

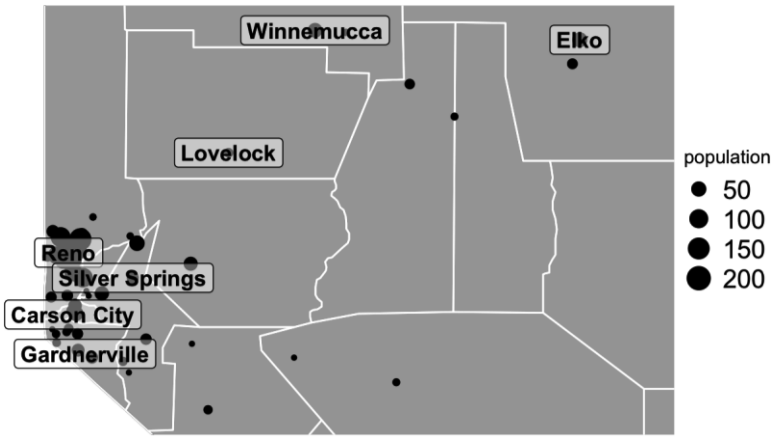


Figure 8-4. SPPC OEA Distribution Map

9 APPENDIX D: SURVEY INSTRUMENTS

In 2025, the Evaluator offered the following surveys to NV Energy customers in both English as well as Spanish. The English versions are provided below and the Spanish translations can be provided upon request.

9.1 In-Home Energy Assessments Participant Survey

The IHEA participant survey was administered in conjunction with the Direct Install program participant survey.

Variable	Definition
FirstName & LastName	Name of customer
TERRITORY	A = NPC; B = SPPC
ADDRESS	Street address
ZIP	Zip code
EMAIL	Email address
PHONE	10 digit phone number
DATE	Audit date - mm/dd/yyyy
PROGRAM	1 = IHEA; 2 = DI + IHEA; 3 = DI only
APS_QTY	Quantity of advanced power strips installed, per program data
FILT_QTY	Quantity of air filters installed/left behind, per program data
WHIST_QTY	Quantity of furnace whistles installed, per program data
LED_QTY	Quantity of LEDs installed, per program data
PHTCL_QTY	Quantity of LED/photocell combos installed, per program data
REFTHERM_QTY	Quantity of refrigerator thermometers installed, per program data
FRZTHERM_QTY	Quantity of freezer thermometers installed, per program data

9.1.1 Introduction

1. Please use the drop-down menu to choose your language preference before you start the survey.

   Por favor utilice el menú desplegable para elegir el idioma de su preferencia antes de iniciar la encuesta

9.1.2 In-Home Visit

2. Our records show that your household received a free PowerShift In-Home Energy Assessment that may have been part of a Bundled Appointment from NV Energy at [ADDRESS] on [DATE]. The Energy Advisor might have provided several free services, such as an appliance evaluation, air filter replacement, energy-savings report, heating and cooling inspection, insulation assessment, or the installation of energy-efficient light bulbs. Do you remember this appointment?
    1. Yes, I recall this appointment
    2. No, I do not recall this appointment **[THANK AND TERMINATE]**
    3. Someone else in my household handled this appointment **[THANK AND TERMINATE]**
3. Please rate your agreement with the following statements:
   [SCALE: 1 = Strongly disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Strongly agree, 98 = Don't know]
    a. The PowerShift Energy Advisor was on time for your appointment.
    b. The PowerShift Energy Advisor was knowledgeable.
    c. The PowerShift Energy Advisor was professional and courteous.
    d. The PowerShift Energy Advisor was clean and presentable.

[DISPLAY IF COUNT OF Q3 < 3]

4. You indicated some disagreement, please explain:

   [OPEN END]

5. Did the PowerShift Energy Advisor do any of the following?

   [SCALE: 1 = Yes, 2 = No, 97 = Not Applicable, 98 = Don't know]

    a. Inspected your HVAC system (heating, ventilation, AC).
    b. Inspected your home's insulation.
    c. Inspected your appliances (water heater, refrigerator, etc.).
    d. Discuss potential energy savings based on recommended improvements.
    e. Email an energy assessment report with energy efficiency recommendations.

9.1.3 Energy Efficient Measures Verification [DISPLAY SECTION IF PROGRAM>1]

6. According to our records, you received the following energy saving item(s), either installed by the PowerShift Energy Advisor or provided for later installation. Is that correct?

   [RADIO BUTTON OPTIONS WHERE 1 = "Correct", 2 = "Incorrect", 98 = "Don't know"]

   a. **[DISPLAY IF APS_QTY > 0] [APS_QTY]** Advanced power strip(s)
   b. **[DISPLAY IF FILT_QTY > 0] [FILT_QTY]** Air filter(s)
   c. **[DISPLAY IF WHIST_QTY > 0] [WHIST _QTY]** Air filter whistle(s)
   d. **[DISPLAY IF REFTHERM_QTY > 0] [REFTHERM _QTY]** Refrigerator thermometer(s)
   e. **[DISPLAY IF FRZTHERM_QTY > 0] [FRZTHERM _QTY]** Freezer thermometer(s)
   f. **[DISPLAY IF LED_QTY > 0] [LED _QTY]** LED light bulb(s)
   g. **[DISPLAY IF PHTCL _QTY > 0] [PHTCL _QTY]** LED bulbs-with-integrated-photocell
   h. **[DISPLAY IF THERMOSTAT_QTY>0] [THERMOSTAT_QTY]** Smart thermostat(s)

[DISPLAY Q7 AND Q8 IF Q6a =2]

7. How many **advanced power strips** did you receive?

   [TEXT BOX]/[NUMERIC VALUE]

[DISPLAY IF APS_QTY > 0 OR Q7 >0]

8. How many **advanced power strips** are installed/plugged in?

   [TEXT BOX]/[NUMERIC VALUE]

[DISPLAY Q9 THRU Q11 IF Q6b = 2]

9. How many **air filters** did you receive?
   [TEXT BOX]/[NUMERIC VALUE]

[DISPLAY IF FILT_QTY > 0 OR Q9 > 0]

10. How many **air filters** are installed/in use?
    [TEXT BOX]/[NUMERIC VALUE]
11. Did the PowerShift Energy Advisor leave any additional air filters behind for you to install in the future?
    1. Yes (Please specify how many were left)
    2. No
    98. Don't know

[DISPLAY Q12 THRU Q14 IF Q6c = 2]

12. How many **air filter whistles** did you receive?

[TEXT BOX] / [NUMERIC VALUE]

[DISPLAY IF WHIST_QTY > 0 OR Q12 >0]

13. How many **air filter whistles** are installed/in use?

[TEXT BOX] / [NUMERIC VALUE]

14. Did the PowerShift Energy Advisor show you how to reuse the air filter whistle when you replace the air filter in the future?
    1. Yes
    2. No
    98. Don't know

[DISPLAY Q15 IF Q6d = 2]

15. How many **refrigerator thermometers** did you receive?

[TEXT BOX] / [NUMERIC VALUE]

[DISPLAY IF REFTHERM_QTY > 0 OR Q15 >0]

16. How many **refrigerator thermometers** are installed/in use?

[TEXT BOX] / [NUMERIC VALUE]

[DISPLAY Q17 IF Q6e = 2]

17. How many **freezer thermometers** did you receive?

[TEXT BOX] / [NUMERIC VALUE]

[DISPLAY IF FRZTHERM_QTY > 0 OR Q18 >0]

18. How many **freezer thermometers** are installed/in use?

[TEXT BOX] / [NUMERIC VALUE]

[DISPLAY Q19 IF Q6f = 2]

19. How many **LED light bulbs** did you receive?

[TEXT BOX] / [NUMERIC VALUE]

[DISPLAY IF LED_QTY > 0 OR Q19 >0]

20. How many **LED light bulbs** are installed/in use?

[TEXT BOX] / [NUMERIC VALUE]

[DISPLAY Q21 IF Q6g =2]

21. How many **LED bulbs-with-integrated-photocell**s did you receive?

    [TEXT BOX] / [NUMERIC VALUE]

[DISPLAY IF PHTCL _QTY > 0 OR Q21 >0]

22. How many **LED bulbs-with-integrated-photocells** are installed/in use?

    [TEXT BOX] / [NUMERIC VALUE]

[DISPLAY IF Q6f =1 OR Q20 > 0]

23. What happened to the old light bulbs that the PowerShift Energy Advisor replaced with new LED light bulbs?
    1. The PowerShift Energy Advisor left them at my house
    2. The PowerShift Energy Advisor took the old light bulbs with them
    3. Other (Please Specify) **[TEXT BOX]**
    98. Don't know

[DISPLAY IF Q6 = 1 OR Q7 > 0 OR Q12 > 0]

24. Did your PowerShift Energy Advisor provide instructions for the proper installation and use of the following? **[SCALE: 1 = Yes, 2 = No, 98 = Don't know]**
    a) **[DISPLAY IF APS_QTY>0]** Advanced power strip(s)
    b) **[DISPLAY IF WHIST_QTY>0]** Air filter whistle(s)

[DISPLAY IF Q6a = 1 OR Q8 > 0]

25. What is plugged into your advanced power strip(s)?
    (Please select all that apply.)
    1. TV
    2. Game console
    3. Computer
    4. Monitor
    5. Stereo
    6. Media Player (DVD, VCR)
    7. Lighting
    96. Other (Please specify) **[OPEN END]**

[DISPLAY IF FILT_QTY>0]

26. How often did you change your home's air filter(s) before your In-Home Energy Assessment?
    1. Every month
    2. Every 1 – 3 months
    3. Every 3 – 6 months
    4. Once every 6 months
    96. Other (Please specify) **[OPEN END]**
    98. Don't know

[DISPLAY Q27 IF Q6i =2]

27. How many **smart thermostat(s)** did you receive?

    [TEXT BOX] / [NUMERIC VALUE]

[DISPLAY Q28 THRU Q33 IF THERMOSTAT _QTY > 0 OR Q27 >0]

28. How many **smart thermostats** are installed/in use?

    [TEXT BOX] / [NUMERIC VALUE]

29. What type of thermostat did you have before replacing it with the new smart thermostat?
    1. A programmable thermostat that allows you to schedule settings for different times of the day
    2. A standard thermostat that lets you set on/off temperatures
    3. A different Wi-Fi smart thermostat
    98. Don't know

30. Does the smart thermostat control a central cooling system, a central heating system, or both?
    1. Central cooling system
    2. Central heating system
    3. Both cooling and heating systems
    98. Don't know

[DISPLAY IF Q30 = 1 OR 3]

31. Is your central air conditioning system a heat pump?
    1. Yes
    2. No
    98. Don't know

[DISPLAY IF Q30 = 2 OR 3]

32. What type of central heating system do you have?
    1. Central furnace
    2. Heating pump
    3. Both cooling and heating systems
    98. Don't know

[DISPLAY IF Q30 = 2 OR 3]

33. What is the main fuel used by the central heating system?
    1. Electricity
    2. Natural gas
    3. Oil
    4. Something else
    98. Don't know

[DISPLAY Q34 IF ANY Q6 = 1]

34. Did The PowerShift Energy Advisor install the energy savings items that you received or leave them with you to install yourself?

    [RADIO BUTTON OPTIONS WHERE 1 = "Installed", 2 = "Left them for me to install"]

    1. **[DISPLAY IF Q6a = 1] [APS_QTY]** Advanced power strip(s)
    2. **[DISPLAY IF Q6b = 1] [FILT_QTY]** Air filter(s)
    3. **[DISPLAY IF Q6c = 1] [WHIST _QTY]** Air filter whistle(s)
    4. **[DISPLAY IF Q6d = 1] [REFTHERM _QTY]** Refrigerator thermometer(s)
    5. **[DISPLAY IF Q6f = 1] [FRZTHERM _QTY]** Freezer thermometer(s)
    6. **[DISPLAY IF Q6g = 1] [LED _QTY]** LED light bulb(s)
    7. **[DISPLAY IF Q6h = 1] [PHTCL _QTY]** LED bulbs-with-integrated-photocell
    8. **[DISPLAY IF Q6i = 1] [THERMSTAT _QTY]** smart thermostat(s)

9.1.4 Behavioral Savings

35. How informative was your In-Home Energy Assessment with the PowerShift Energy Advisor?
    1. Not at all informative
    2. Somewhat informative
    3. Moderately informative
    4. Very informative
    5. Extremely informative
    98. Don't know

36. During the In-Home Energy Assessment with the PowerShift Energy Advisor, did you learn any tips about how to reduce energy use in your home?
    1. Yes
    2. No
    98. Don't know

[DISPLAY IF Q36=1]

37. How clear were the tips and suggested next steps provided by your PowerShift Energy Advisor?
    1. Not at all clear
    2. Somewhat clear
    3. Moderately clear
    4. Very clear
    5. Extremely clear
    98. Don't know

[DISPLAY IF Q36=1]

38. Have you implemented any of the energy saving tips you learned since receiving the In-Home Energy Assessment?
    1. Yes
    2. No
    98. Don't know
39. How have you taken any of the following energy saving actions as a result of the information from your In-Home Energy Assessment? **[INSERT SCALE AS 1 = YES; 2 = NO; 98 = DON'T KNOW]**

    Home Maintenance & Efficiency:
    1. Replaced air filters
    2. Checked heating/cooling ducts for leaks
    3. Vacuumed refrigerator coils
    4. Tuned-up air conditioning and/or heating system
    5. Cleaned clothes dryer vent
    6. Lowered water heater temperature
    7. Adjusted freezer/refrigerator temperature settings
    8. Unplugged second refrigerator or freezer
    9. Installed energy efficient appliance(s) (clothes washer, clothes dryer, dishwasher, refrigerator, freezer)

Daily Energy Saving Habits:

10. Reduced thermostat temperature in winter / Increased in summer
11. Used dishwasher or laundry machines only with full loads
12. Turned off lights or ceiling fans when not in room
13. Washed clothes in cold water
14. Used a portable fan instead of air conditioning
15. Let dishes air dry
16. Reduced shower time
17. Other (Please specify) **[TEXT BOX]**

40. Have you received a PowerShift rebate from NV Energy when you purchased any of the following appliances from a participating store or through the PowerShift Smart Shop in YEAR?
    1. ENERY STAR certified clothes dryer
    2. ENERY STAR certified clothes washer
    3. **[DISPLAY IF TERRITORY = A]** ENERY STAR certified heat pump clothes dryer
    4. ENERY STAR certified refrigerator
    5. ENERY STAR certified room air conditioner
    6. ENERY STAR certified air purifier
    7. Advanced power strip
    8. No, I have not
41. What is the main reason for you deciding to participate in the PowerShift In-Home Energy Assessment?
    1. To save money on energy bill(s)
    2. To reduce my environmental impact
    3. NV Energy provided it for free
    4. A recommendation from an NV Energy Representative
    5. To improve my home's energy efficiency
    6. To identify potential energy saving upgrades
    96. Other (Specify) **[OPEN END]**
    98. Don't know
42. How did you request your PowerShift In-Home Energy Assessment or Bundled Appointment?
    1. Signed up on NV Energy's website
    2. Emailed NV Energy
    3. Signed up in-person at a local community event
    4. Called NV Energy
    96. Other (Specify) **[OPEN END]**
    98. Don't know

9.1.5 Satisfaction

43. How could the In-Home Energy Assessment be improved? Select all that apply.
    1. Provide more personalized recommendations
    2. Offer a more thorough inspection of my home
    3. Provide clearer explanation of the energy saving tips
    4. Offer a more detailed report with actionable steps
    5. Follow up with additional support or resources
    6. Install more energy saving items during the visit
    7. Offer more flexible appointment times
    8. No improvements needed
    9. Other (please specify) **[OPEN END]**
44. How did you learn about the free In-Home Energy Assessment or the Bundled Appointment? (Please select all that apply.) **[RANDOMIZE]**
    1. Digital display advertisement
    2. Social media
    3. Google or another internet search
    4. NV Energy email
    5. Television commercial
    6. Radio advertisement
    7. Video display at DMV location
    8. Outdoor advertisement (billboards, transit ad)
    9. Newspaper advertisement
    10. PowerShift Smart Shop online marketplace
    11 [DISPLAY IF TERRITORY = A] Video display at Mariana's supermarket
    12. Previous experience with an NV Energy's energy efficiency program(s)
    13. Information my child brought home from an NV Energy school event
    96. Other (Please Specify) **[OPEN END]**
    98. Don't know
45. How would you rate your experience with the sign-up process for a visit from the PowerShift Energy Advisor?

    [SCALE: 1 = Very difficult, 2 = Somewhat difficult, 3 = Neither difficult nor easy, 4 = Somewhat easy, 5 = Very easy, 98 = Don't know]

[DISPLAY IF Q45 = 1 OR 2]

46. How could the process be improved?

    [OPEN END]

47. How satisfied are you with each of the following:

[SCALE: 1 = Very dissatisfied, 2 = Somewhat dissatisfied, 3 = Neither satisfied nor dissatisfied, 4 = Somewhat satisfied, 5 = Very satisfied, 98 = Don't know]

a) The information you received from your PowerShift Energy Advisor
b) **[DISPLAY IF PROGRAM =2]** The performance of the items installed
c) The In-Home Energy Assessment overall
d) NV Energy's PowerShift products and services
e) NV Energy as your service provider

[DISPLAY IF ANY IN Q47 = 1 OR 2]

48. Why are you dissatisfied with those aspects you mentioned?

[OPEN END]

9.1.6 Demographics

49. The next few questions are about your household. This information will only be reported in total, and you may select "Prefer not to answer" for any questions in this section.
Which of the following best describes your home?
1. Manufactured or mobile home
2. Single-family home
3. Duplex or townhouse
4. Apartment or condominium
96. Other (Please specify) **[OPEN END]**
98. Don't know
99. Prefer not to answer

50. How long have you lived at your current address?
1. Less than 1 year
2. 1 to 5 years
3. More than 5 years
98. Don't know
99. Prefer not to answer

51. Do you own or rent your home?
1. Own
2. Rent
3. Own and rent to someone else
99. Prefer not to answer

52. When was your home built?
    1. Before 1960
    2. 1960-1979
    3. 1980-1999
    4. 2000-2009
    5. 2010 to 2019
    6. 2020 to 2024
    7. Newly built (2025)
    98. Don't know
    99. Prefer not to answer
53. How many square feet is your home?
    (Please provide your best estimate.)
    1. Less than 1,000 square feet
    2. 1,000-1,999 square feet
    3. 2,000-2,999 square feet
    4. 3,000-3,999 square feet
    5. Greater than 4,000 square feet
    98. Don't know
    99. Prefer not to answer
54. What is the main fuel used to heat your home?
    1. Electricity
    2. Natural gas
    3. Propane
    4. Oil
    96. Other (Please specify) **[OPEN END]**
    97 Don’t heat home
    98. Don’t know
    99. Prefer not to answer
55. What fuel does your main water heater use?
    1. Electricity
    2. Natural Gas
    3. Propane
    96. Other (Please specify) **[OPEN END]**
    98. Don’t know
    99. Prefer not to answer

56. Including yourself, how many people live in your household year-round?
    1. 1
    2. 2
    3. 3
    4. 4
    5. 5
    6. 6
    7. 7
    8. 8 or more
    98. Don't know
    99. Prefer not to answer

[SKIP TO END OF BLOCK IF Q56>8]

57. Is your annual household income over or under [CUTOFF]?
    [SCALE: 1 = At or below this value, 2 = Above this value, 98 = Don't know, 99 = Prefer not to answer]
    a) $57,150 **[DISPLAY IF Q56=1 & TERRITORY = A]**
    b) $65,300 **[DISPLAY IF Q56= 2 & TERRITORY = A**
    c) $73,450 **[DISPLAY IF Q56= 3 & TERRITORY = A]**
    d) $81,600 **[DISPLAY IF Q56= 4 & TERRITORY = A]**
    e) $88,150 **[DISPLAY IF Q56= 5 & TERRITORY = A**
    f) $94,700 **[DISPLAY IF Q56= 6 & TERRITORY = A]**
    g) $101,200 **[DISPLAY IF Q56= 7 & TERRITORY = A]**
    h) $107,750 **[DISPLAY IF Q56= 8 & TERRITORY = A]**
    i) $61,054 **[DISPLAY IF Q56= 1 & TERRITORY = B]**
    j) $69,781 **[DISPLAY IF Q56= 2 & TERRITORY = B]**
    k) $78,509 **[DISPLAY IF Q56= 3 & TERRITORY = B]**
    l) $87,192 **[DISPLAY IF Q56= 4 & TERRITORY = B]**
    m) $94,196 **[DISPLAY IF Q56= 5 & TERRITORY = B]**
    n) $101,152 **[DISPLAY IF Q56= 6 & TERRITORY = B]**
    o) $108,151 **[DISPLAY IF Q56= 7 & TERRITORY = B]**
    p) $115,107 **[DISPLAY IF Q56= 8 & TERRITORY = B]**

9.1.7 End of Survey Thank You Message

On behalf of PowerShift by NV Energy, thank you for your valuable feedback!

De parte de PowerShift de NV Energy, gracias por sus valiosos comentarios.

9.2 Online Energy Assessment Participant Survey

Variable	Definition
YEAR	Current program year
CUSTOMER NAME	Name of customer
EMAIL	Email address
TERRITORY	A = NPC; B = SPPC

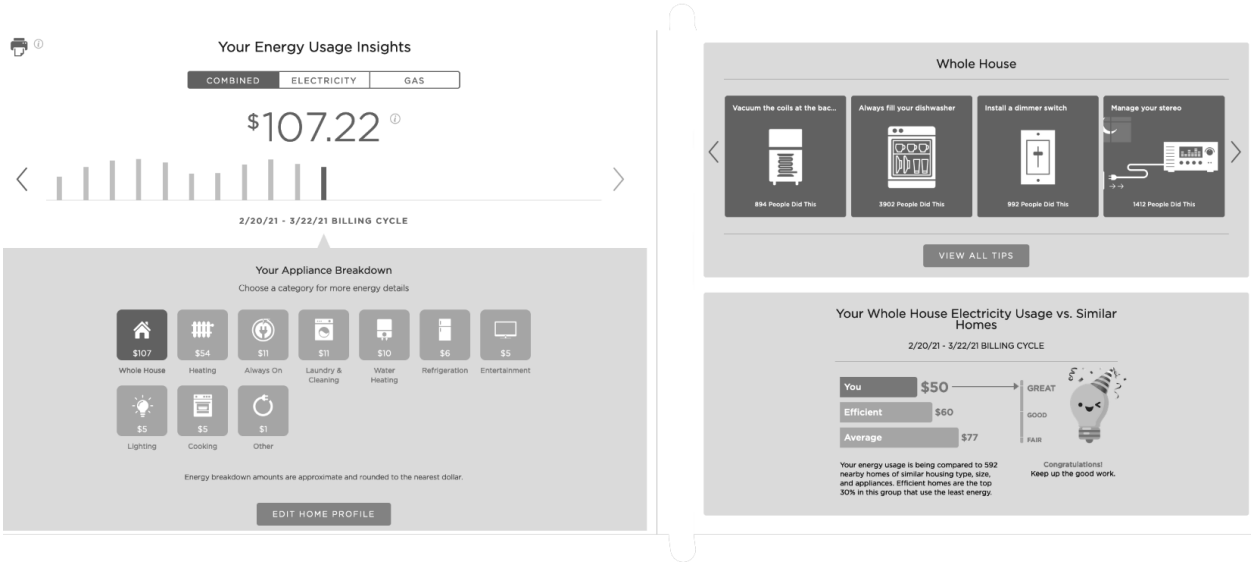
9.2.1 Introduction

1. Please use the drop-down menu to choose your language preference before you start the survey.

   Por favor utilice el menú desplegable para elegir el idioma de su preferencia antes de iniciar la encuesta.

9.2.2 Initial Screening

2. As an NV Energy customer, have you taken a free Online Energy Assessment via your MyAccount on our website? The assessment provides personalized information on how you use energy and tips for how you can be more efficient and save money and may have looked like the example shown below.



1. Yes
2. No
99. Don’t know

[DISPLAY Q3 IF Q2 = 2 OR 98]

3. To clarify, the Online Energy Assessment is a resource found on your MyAccount dashboard under the "Save Energy" drop-down menu and provides information including:
   - A breakdown of your home's electric use by kilowatt hours (kWh), cost, or percentages for each billing cycle
   - Personalized tips and recommendations on how to reduce your energy usage and save on monthly bills

   Do you recall logging into your MyAccount for this assessment?

   1. Yes
   2. No **[TERMINATE]**
4. Were you the person who completed your home's Online Energy Assessment?

   1. Yes
   2. No **[TERMINATE]**
   98. Don't know **[TERMINATE]**
5. How did you learn about the Online Energy Assessment? **[RANDOMIZE]**
   1. NV Energy website (MyAccount)
   2. NV Energy bill inserts or printed message on your bill
   3. Friend, neighbor, relative or colleague (word-of-mouth)
   4. NV Energy Home Energy Advisor
   5. NV Energy newsletter
   6. NV Energy email
   7. NV Energy sponsored booth at a community event
   8. Social media
   9. Information my child brought home from an NV Energy school event
   10. Internet search
   11. Other (Please specify) **[OPEN ENDED]**
   98. Don't know

9.2.3 Online Energy Assessment

6. What motivated you to complete the Online Energy Assessment?

   1. To learn how to save energy and money on my bill(s)
   2. Environmental reasons
   3. NV Energy provides it for free
   4. To better understand my home's energy usage
   5. To see if I qualify for energy-saving products or rebates
   6. To compare my energy usage with similar households
   7. A recommendation from a friend, family member, or NV Energy Home Energy Advisor
   8. Out of curiosity or general interest in energy efficiency
   96. Other (Please specify) **[OPEN ENDED]**

7. Which sections of the assessment did you complete? **[Please select all that apply]**

    1. Home's energy usage
    2. Home appliances
    3. Heating and cooling equipment
    4. Water heater
    5. Electric vehicles
    6. Weatherization (e.g., adding insulation, duct sealing)
    7. Home characteristics (e.g., home size, number of people residing in the home)
    8. Lighting
    9. Specialty equipment (e.g., pools, saunas, hot tubs, well pumps, water pump for rooftop solar)
    10. Smart thermostats
    11. Other (Please specify) **[OPEN ENDED]**
    99. Don't know
8. How easy or difficult was it to complete the Online Energy Assessment?

    [SCALE: 1 = 1 (Very difficult), 2 = Difficult, 3 = Neither difficult nor easy, 4 = Easy, 5 = 5 (Very easy), 98 = Don't know]

[DISPLAY Q9 IF Q8 < 3]

9. What challenges did you encounter while completing the assessment? [Please select all that apply]

    1. Signing on to MyAccount
    2. Navigating in the Online Assessment dashboard
    3. Couldn't answer some questions due to lack of information
    4. Confusing or unclear questions
    5. Technical issues (e.g., website errors, slow loading times)
    6. Assessment took too long to complete
    7. Didn't understand the energy saving recommendations provided
    96. Other (Please specify) **[OPEN ENDED]**
    98. Don't know

9.2.4 Online Assessment Suggestions

10. What energy-saving tips and recommendations did you receive when you completed the Online Energy Assessment? **[Please select all that apply]**

    1. No-cost and/or low-cost ways to save energy
    2. Tips that require an upfront investment or purchase, but would help save money on my electric bill
    3. Energy saving measures that may be cost-justified for my home
    4. Information about rebates or incentives for energy efficient upgrades
    5. Tips specific to seasonal energy savings (e.g., summer vs. winter strategies)
    96. Other (Please specify) **[OPEN ENDED]**
    98. Don't know

11. Please rate your level of agreement with each of the following statements:

[SCALE: 1 = 1 Strongly disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = 5 Strongly agree, 98 = Don't know]

a. I have reduced my energy bill because of the tips and recommendations from the assessment.
b. I learned something I did not already know from the assessment.
c. The assessment made me aware of areas in my home where I could be more energy efficient.
2. The assessment made recommendations that I was not able to implement.
d. The information helped me understand how I use energy in my home.
e. The energy saving recommendations were practical for my home.
f. The recommendations aligned with my budget.
g. The contents of the Online Energy Assessment website are interesting.

9.2.5 Energy Saving Behaviors Section

12. Have you taken any of the following energy saving actions in 2025? **[INSERT SCALE AS 1 = YES; 2 = NO; 98 = DON'T KNOW]**

Home Maintenance & Efficiency:

1. Replaced air filters
2. Checked heating/cooling ducts for leaks
3. Vacuumed refrigerator coils
4. Tuned-up air conditioning and/or heating system
5. Cleaned clothes dryer vent
6. Lowered water heater temperature
7. Adjusted freezer/refrigerator temperature settings
8. Unplugged second refrigerator or freezer
9. Installed energy efficient appliance(s) (clothes washer, clothes dryer, dishwasher, refrigerator, freezer)

Daily Energy Saving Habits:

10. Reduced thermostat temperature in winter / Increased in summer
11. Used dishwasher or laundry machines only with full loads
12. Turned off lights or ceiling fans when not in room
13. Washed clothes in cold water
14. Used a portable fan instead of air conditioning
15. Let dishes air dry
16. Reduced shower time
17. Other (Please specify) **[TEXT BOX]**

[DISPLAY Q13 IF ANY IN Q39 = 1]

13. Have you noticed any change on your energy bill since you made changes to your home and/or your behavior after taking the Online Energy Assessment?
    1. Yes, my energy bill has decreased
    2. Yes, my energy bill has increased
    3. No, there does not seem to be a change in my energy bill
    4. Too soon to tell
    98. Don't know

[DISPLAY Q14 IF Q13 = 1]

14. How satisfied are you with the savings you noticed on your energy bill since making these changes?

    [SCALE: 1 = 1 (VERY DISSATISFIED), 2 = DISSATISFIED, 3 = NEITHER, 4 = SATISFIED, 5 = 5 (VERY SATISFIED), 98 = DON'T KNOW]

9.2.6 Cross Program Participation

15. Have you received a PowerShift rebate from NV Energy when you purchased any of the following appliances from a participating store or through the PowerShift Smart Shop in YEAR?

    1. ENERY STAR certified clothes dryer
    2. ENERY STAR certified clothes washer
    3. **[DISPLAY IF TERRITORY = A]** ENERY STAR certified heat pump clothes dryer
    4. ENERY STAR certified refrigerator
    5. ENERY STAR certified room air conditioner
    6. ENERY STAR certified air purifier
    7. Advanced power stri**p**
    8. No, I have not

[DISPLAY Q16 IF Q Error! Reference source not found. **= 1 – 7]**

16. Did you participate in these products or services from NV Energy because of the Online Energy Assessment?
    1. Yes
    2. No
    98. Don't know

9.2.7 Satisfaction

17. Please rate your satisfaction with the following aspects of the Online Energy Assessment.

[SCALE: 1 = 1 (Very dissatisfied), 2 = Dissatisfied, 3 = Neither, 4 = Satisfied, 5 = 5 (Very satisfied), 98 = Don't know]

a. Your overall experience with the Online Energy Assessment
b. The information, tips and recommendations you received from completing the Online Energy Assessment
c. The time it took you to complete the Online Energy Assessment

[DISPLAY Q18 IF ANY Q17 <3]

18. Why are you dissatisfied?

[TEXT BOX]

19. Please rate your overall satisfaction with NV Energy as your utility service provider.
[SCALE: 1 = 1 (Very dissatisfied), 2 = Dissatisfied, 3 = Neither, 4 = Satisfied, 5 = 5 (Very satisfied), 98 = Don't know]
20. Do you have any recommendations to improve the Online Energy Assessment?

[TEXT BOX]

9.2.8 Demographics

The next few questions are about your household and are optional.

21. Which of the following best describes the home you completed the Online Energy Assessment for?
    1. Manufactured or mobile home
    2. Single-family home
    3. Duplex or townhouse
    4. Apartment or condominium
    5. Other (Please specify) **[OPEN ENDED]**
    98. Don't know
    99. Prefer not to answer
22. Do you own or rent the home you completed the Online Energy Assessment for?
    1. Own
    2. Rent
    99. Prefer not to answer

23. When was the home you completed the Online Energy Assessment for built?
    1. Before 1960
    2. 1960-1979
    3. 1980-1999
    4. 2000-2009
    5. 2010-2019
    6. 2020 or later
    98. Don't know
    99. Prefer not to answer
24. How large is the home you completed the Online Energy Assessment for?
    1. Less than 1,000 square feet
    2. 1,000-2,000 square feet
    3. 2,000-3,000 square feet
    4. 3,000-4,000 square feet
    5. Greater than 4,000 square feet
    98. Don't know
    99. Prefer not to answer
25. What is the main fuel used to heat the home you completed the Online Energy Assessment for?
    1. Electricity
    2. Natural gas
    3. Propane
    4. Oil
    96. Other (Please specify) **[TEXT BOX]**
    5. Don't heat home
    98. Don't know
    99. Prefer not to answer
26. What fuel does the main water heater use in the home you completed the Online Energy Assessment for?
    1. Electricity
    2. Natural Gas
    3. Propane
    4. Oil
    5. Other (Please specify) **[TEXT BOX]**
    98. Don't know
    99. Prefer not to answer
27. Including yourself, how many people are living in your household?

    [DROP DOWN BOX – 1-7, 8 or more, 99 Prefer not to answer]

28. Is your annual household income over or under **[CUTOFF]**?

[SCALE: 1 = Over, 2 = Under, 98 = Don't know, 99 = Prefer not to answer]

a) $57,150 **[DISPLAY IF Q27 = 1 & TERRITORY = A]**
b) $65,300 **[DISPLAY IF Q27 = 2 & TERRITORY = A**
c) $73,450 **[DISPLAY IF Q27 = 3 & TERRITORY = A]**
d) $81,600 **[DISPLAY IF Q27 = 4 & TERRITORY = A]**
e) $88,150 **[DISPLAY IF Q27 = 5 & TERRITORY = A**
f) $94,700 **[DISPLAY IF Q27 = 6 & TERRITORY = A]**
g) $101,200 **[DISPLAY IF Q27 = 7 & TERRITORY = A]**
h) $107,750 **[DISPLAY IF Q27 = 8 & TERRITORY = A]**
i) $61,054 **[DISPLAY IF Q27 = 1 & TERRITORY = B]**
j) $69,781 **[DISPLAY IF Q27 = 2 & TERRITORY = B]**
k) $78,509 **[DISPLAY IF Q27 = 3 & TERRITORY = B]**
l) $87,192 **[DISPLAY IF Q27 = 4 & TERRITORY = B]**
m) $94,196 **[DISPLAY IF Q27 = 5 & TERRITORY = B]**
n) $101,152 **[DISPLAY IF Q27 = 6 & TERRITORY = B]**
o) $108,151 **[DISPLAY IF Q27 = 7 & TERRITORY = B]**
p) $115,107 **[DISPLAY IF Q27 = 8 & TERRITORY = B]**

9.2.9 End of Survey Thank You Message

On behalf of PowerShift by NV Energy, thank you for your valuable feedback!

De parte de PowerShift de NV Energy, gracias por sus valiosos comentarios.

9.2.10 Termination Page

Thank you for your time – however, this survey is meant only for customers who recall using the Online Energy Assessment tool from NV Energy.

Gracias por su tiempo; sin embargo, esta encuesta está destinada únicamente para los clientes que recuerdan haber realizado la evaluación energética en línea de NV Energy.

DSM-12

Home Energy Saver Program
NV Energy
Program Year 2025

Measurement and Verification Report

March 24, 2026

Prepared for:

NVEnergy

Prepared by:

QUALUS

100 Colonial Center Parkway

Suite 400

Lake Mary, FL 327463

Table of Contents

List of Tables

1 EXECUTIVE SUMMARY

This Measurement and Verification ("M&V") report provides verified ex-post energy and demand impacts achieved by the Home Energy Saver ("HES") program that NV Energy offered to Sierra Pacific Power Company and Nevada Power Company ("SPPC" and, collectively with "NPC," "NV Energy") customers during 2025. This M&V report is provided by the Evaluator, Qualus LLC (formerly ADM Associates Inc., which was acquired by Qualus LLC in July 2025), an independent, third-party contractor that provides evaluation and M&V services and reports for numerous electric and gas utility clients.

The HES program's goal is to reduce kilowatt hour ("kWh") energy consumption for participating residential customers. The HES program incentivized customers to purchase and install energy-efficient equipment through instant discounts at the point of sale or a customer rebate after installation and commissioning of eligible equipment.

1.1 Summary of 2025 HES Program Impacts

For the 2025 HES program, ex-post verified annual energy savings were 16,124,894 kWh for the NPC service territory and 4,494,073 kWh for the SPPC service territory. First-year energy savings, i.e., the energy saved during the 2025 calendar year, were 5,521,157 kWh for NPC and 1,777,499 kWh for SPPC. Summer critical peak demand (kW) savings achieved by this program were 6,351.23 kW for NPC and 969.51 kW for SPPC.

Critical peak demand savings are provided per month and by rate class in Appendix A: Savings Per Month by Rate Class. For detailed information on how critical peak demand reductions were determined, please see Section 3. Table 1-1 and Table 1-2 provide program-level summaries of the ex-post energy impacts.

Table 1-1. HES Program Summary

Territory	Channel	Ex-Ante Energy Savings (kWh)	Ex-Post Energy Savings (kWh)	Variance	Realization Rate (RR)
NPC	Appliances	4,974,146	4,937,046	-37,100	99%
	Res AC	5,440,005	6,112,070	672,066	112%
	Pool Pumps	5,306,862	5,075,778	-231,084	96%
NPC Total		**15,721,013**	**16,124,894**	**403,882**	**103%**
SPPC	Appliances	4,254,863	4,250,836	-4,027	100%
	Res AC	491,825	243,237	-248,588	49%
SPPC Total		**4,746,689**	**4,494,073**	**-252,615**	**95%**
Total		**20,467,702**	**20,618,967**	**151,266**	**101%**

Table 1-2. HES Energy Impacts summary

Territory	Channel	First-Year (2025) Energy Savings (kWh)	Ex-Post Energy Savings (kWh)	Summer Critical Peak Demand Savings (kW)	Lifetime Energy Savings (kWh)
NPC	Appliances	1,801,353	4,937,046	654.34	49,026,545
	Res AC	3,002,111	6,112,070	3,879.52	32,047,451
	Pool Pumps	717,693	5,075,778	1,817.37	5,195,025
NPC Total		**5,521,157**	**16,124,894**	**6,351.23**	**86,269,022**
SPPC	Appliances	1,590,962	4,250,836	465.65	42,227,373
	Res AC	186,537	243,237	503.86	540,015
SPPC Total		**1,777,499**	**4,494,073**	**969.51**	**42,767,388**
Total		**7,298,656**	**20,618,967**	**7,320.74**	**129,036,410**

1.2 Residential High-Efficiency Air Conditioning ("Res AC") Channel

Ex-post savings were estimated using the most precise M&V methods applicable for the channel measures and are described in the methodology section. Table 1-3 and Table 1-4 provide a summary of Res AC evaluation results by program channel component, building type, and measure category for both NPC and SPPC.

Table 1-3. Evaluation Results by Measure Category for the 2025 NPC Res AC Channel m

Project Type	Building Type	Measure Name	Total Installs	Annual Energy Savings (kWh)			Effective Useful Life (EUL), Years	Ex-Post Lifetime Energy Savings (kWh)
				Ex-Ante	Ex-Post	RR		
Low Income	Single Family	AC Tune-Up	151	238,206	171,395	72%	5	856,974
		HP Tune-Up	14	22,085	23,619	107%	5	118,095
	Multi Family	AC Tune-Up	930	969,413	957,353	99%	5	4,786,763
		HP Tune-Up	606	631,682	805,016	127%	5	4,025,081
Retrofit	Single Family	AC Tune-Up	599	793,579	776,689	98%	5	3,883,444
		HP Tune-Up	35	46,369	69,135	149%	5	345,675
		AC Replacement	184	70,862	82,132	116%	18	1,478,370
		HP Replacement	62	43,449	34,583	80%	15	518,742
		HPWH Replacement	9	16,143	14,712	91%	10	147,123
	Multi Family	AC Tune-Up	1,164	1,137,065	1,140,718	100%	5	5,703,590
		HP Tune-Up	1,506	1,471,151	2,036,719	138%	5	10,183,594
Totals			**5,260**	**5,440,005**	**6,112,070**	**112%**	**5.2**	**32,047,451**
Number of Participants			**5,031**	**Critical Peak Demand Reduction (kW)**				**3,879.52**

Table 1-4. Evaluation Results by Measure Category for the 2025 SPPC Res AC Channel

Project Type	Building Type	Measure Name	Total Installs	Annual Energy Savings (kWh)			Effective Useful Life (EUL), Years	Ex-Post Lifetime Energy Savings (kWh)
				Ex-Ante	Ex-Post	RR		
Retrofit	Single Family	AC Tune-Up	101	31,302	22,953	73%	5	114,765
		CCHP Replacement	16	56,283	-77,998	-139%	15	-1,169,975
		HPWH Replacement	14	32,214	29,253	91%	10	292,526
	Multi Family	AC Tune-Up	1,335	368,233	272,479	74%	5	1,362,393
		HP Tune-Up	1	276	796	289%	5	3,980
		CCHP Replacement	1	3,518	-4,245	-121%	15	-63,675
Totals			**1,468**	**491,825**	**243,237**	**49%**	**2.2**	**540,015**
Number of Participants			**1,452**	**Critical Peak Demand Reduction (kW)**				**503.86**

To summarize the results for the Res AC channel:

- In total, 5,260 measures were installed across 5,031 participant premises in NPC and 1,468 measures were installed across 1,452 participant premises in SPPC.
- The verified electric impacts for the Res AC channel were 6,112,070 kWh in NPC and 243,237 kWh in SPPC, which represented a realization rate of 112 percent and 49 percent respectively.
- Central AC tune-ups made up 54 percent of the total Res AC measures in NPC and 98 percent of total installs in SPPC, with a 97 percent and 74 percent realization rate respectively. The realization rates were the result of ex-post savings using site specific parameters while ex-ante savings used a deemed savings estimate. Multifamily AC tune-ups made up 74 percent of the total number of NPC AC tune-ups and 93 percent of total SPPC AC tune-ups.
- Heat Pump tune-ups made up 41 percent of the total measure installs in NPC with a 135 percent realization rate.
- Central AC and HP replacements combined made up four percent of the total measure installs in NPC and one percent in SPPC, with a realization rate of 102 percent and -138 percent respectively.
- The lifetime energy savings for the Res AC channel was 32,047,451 kWh in NPC and 540,015 in SPPC.
- Critical summer peak (or on-peak) demand savings were calculated by month and rate class. The estimated peak demand savings associated with the 2025 channel was 3,879.52 kW in NPC and 503.86 in SPPC.

Table 1-5 provides a summary of recommendations based on observations of the Res AC channel

operation that the Evaluator believes will continue to improve the HES Program's performance.

Table 1-5. Res AC Program Recommendations

Title	Recommendations
Re-establish HP and AC installations in SPPC	In 2025, the SPPC Res AC program was mainly AC tune-ups (98 percent of total measure count). The Evaluator recommends investing resources to re-establish HP and AC installations in SPPC.
Estimate ex-ante kWh savings using pre/post parameters for AC and HP tune-ups	In 2025, HP and AC tune-ups made up a significant portion of the NPC and SPPC Res AC program. The HP tune-ups in both sectors have had realization rates higher than 100 percent in 2024 and 2025 while multifamily AC tune-ups in SPPC have had a realization rate lower than 100% in recent years. To improve realization rates, Qualus recommends ex-ante savings use the pre/post tune-up parameters to estimate kWh savings.

1.3 Residential Pool Pump Channel

Table 1-6 and Table 1-7 provide Pool Pump summaries of ex-post energy impacts for NPC in the 2025 program year.

Table 1-6. NPC Pool Pump Channel Summary of Evaluation Results

Measure	Ex-Ante Energy Savings (kWh)	Ex-Post Energy Savings (kWh)	Variance	Realization Rate
Winterization Calibration	5,258,171	4,956,716	-301,455	94%
Peak Avoidance Calibration	48,691	119,062	70,371	245%
Total	**5,306,862**	**5,075,778**	**-231,084**	**96%**

Table 1-7. NPC Pool Pump Channel Summary of Energy Impacts

Measure	First-Year (2025) Energy Savings (kWh)	Verified Annual Energy Savings	Effective Useful Life ("EUL") (years)	Summer Critical Peak Demand Savings (kW)	Lifetime Energy Savings (kWh)[1]
Winterization Calibration	634,910	4,956,716	1.00	1,774.74	4,956,485
Peak Avoidance Calibration	82,783	119,062	2.00	42.63	238,540
Total	**717,693**	**5,075,778**	**1.02**	**1,817.37**	**5,195,025**

[1] Lifetime energy savings are derived from the Qualus GURU analysis.

To summarize the results for the Residential Pool Pumps channel:

- For the winterization calibrated pumps, annual ex-ante energy savings and ex-post savings were 5,258,171 kWh and 4,956,716 respectively. The savings represent a realization rate of 94 percent. First-year savings during the 2025 calendar year were 634,910kWh.
- For the peak avoidance calibrated pumps, annual ex-ante energy savings and ex-post savings were 48,691 kWh and 119,062 respectively. The savings represent a realization rate of 245 percent. First-year savings during the 2025 calendar year was 82,783 kWh.
- Critical peak demand savings are provided per month and by rate class in Appendix A: Savings Per Month by Rate Class. The estimated peak demand savings associated with the 2025 Pool Pump Program was 1,817.37 kW.

Table 1-8 summarizes recommendations to improve the Pool Pump channel's performance.

Table 1-8. Recommendations Summary

Recommendation Title	Summary
Track previous calibration dates	The implementation contractor and NV Energy should track the previous calibration dates of the recalibrated pumps so that the implementation contractor and the Evaluator can verify the recalibration is not taking place within the previous EUL.
Verify calibrations include a standard efficiency calibration	In 2025 there was a high percentage of winterization calibrations where the only change that occurred was the reduction of the operating hours. The Evaluator recommends that NV Energy and the implementation contractor verify that the pump being calibrated is a VSD pool pump, and that the VSD pump is being optimized during a winterization or peak avoidance calibration.
Review ex-ante savings	Although ex-ante savings are estimated using site specific parameters for each measure, a large range of realization rates at the record level was seen. The Evaluator recommends that NV Energy and the implementation contractor review the ex-ante savings calculation with evaluators to improve realization rates.
Data entry errors	The Evaluator Identified multiple data entry errors which affected ex-post savings calculations. The Evaluator recommends increasing training for program contractors to reduce data errors and improve program realization rates.

1.4 Residential Appliance Channel

Table 1-9 and Table 1-10 provide summaries of evaluation results by measure category for both NPC and SPPC.

Table 1-9. Evaluation Results by Measure Category for the 2025 NPC Appliances

Channel	Measure Name	Total Installs	First-Year (2025) Energy Savings (kWh)	Annual Energy Savings (kWh)			Effective Useful Life (EUL), Years	Ex-Post Lifetime Energy Savings (kWh)
				Ex-Ante	Ex-Post	RR		
Marketplace	Advanced Power Strip	327	29,128	53,955	53,511	99%	10	535,114
	ENERGY STAR® Air Purifier	100	1,717	14,750	13,877	94%	9	124,893
Marketplace Total		**427**	**30,845**	**68,705**	**67,388**	**98%**	**9.8**	**660,007**
Appliance	Advanced Power Strip	25,391	1,508,780	4,189,515	4,155,067	99%	10	41,550,670
	ENERGY STAR® Clothes Washer	642	40,323	77,146	76,911	100%	14	1,076,757
	ENERGY STAR® Air Purifier	4,577	221,405	638,780	637,679	100%	9	5,739,111
Appliance Total		**30,610**	**1,770,508**	**4,905,441**	**4,869,657**	**99%**	**9.9**	**48,366,539**
Totals		**31,037**	**1,801,353**	**4,974,146**	**4,937,046**	**99%**	**9.9**	**49,026,545**
Appliance Critical Peak Demand Reduction (kW)			**645.53**	**Marketplace Critical Peak Demand Reduction (kW)**				**8.81**

Table 1-10. Evaluation Results by Measure Category for the 2025 SPPC Appliances

Channel	Measure Name	Total Installs	First-Year (2025) Energy Savings (kWh)	Annual Energy Savings (kWh)			Effective Useful Life (EUL), Years	Ex-Post Lifetime Energy Savings (kWh)
				Ex-Ante	Ex-Post	RR		
Marketplace	Advanced Power Strip	98	8,831	16,170	16,037	99%	10	160,370
	ENERGY STAR® Air Purifier	43	917	6,343	6,020	95%	9	54,180
Marketplace Total		**141**	**9,747**	**22,513**	**22,057**	**98%**	**9.7**	**214,550**
Appliances	Advanced Power Strip	17,430	1,046,554	2,875,950	2,852,303	99%	10	28,523,027
	ENERGY STAR® Clothes Washer	652	41,053	72,062	74,175	103%	14	1,038,448
	ENERGY STAR® Air Purifier	4,059	207,148	571,539	571,668	100%	9	5,145,012
	Engine Block Heater Controller	1,320	286,460	712,800	730,634	103%	10	7,306,335
Appliance Total		**23,461**	**1,581,215**	**4,232,351**	**4,228,779**	**100%**	**9.9**	**42,012,823**
Totals		**23,602**	**1,590,962**	**4,254,863**	**4,250,836**	**100%**	**9.9**	**42,227,373**
Appliance Critical Peak Demand Reduction (kW)			**462.79**	**Marketplace Critical Peak Demand Reduction (kW)**				**2.86**

To summarize the results for the Residential Appliances Channel:

- In total, 31,037 measures were installed in NPC and 23,602 measures were installed in SPPC.
- The verified electric impacts for the Appliance channel were 4,937,046kWh in NPC and 4,250,836 kWh in SPPC, which represented a realization rate of 99 percent and 100 percent respectively.
- Advanced Power Strip installations sold at participating retail stores and through the online marketplace made up 85 percent of the total ex-post savings in NPC and 67 percent in SPPC.
- Engine Block Heater Controllers ("EBHC") made up 17 percent of total ex-post savings in the SPPC territory.
- The lifetime energy savings for the program was 49,026,545 kWh in NPC and 42,227,373 kWh in SPPC.
- Critical summer peak (or on-peak) demand savings were calculated by month and rate class. The estimated peak demand savings associated with the 2025 program was 654.34 kW for NPC and 465.65 kW for SPPC.

Table 1-11 provides a summary of recommendations based on observations of program channel operation that the Evaluator believes will continue to improve program performance. Most of these recommendations relate to the improvement of program realization rates, the facilitation of a more streamlined end-of-year M&V process, and participation.

Table 1-11. Appliance Recommendations

Title	Recommendations
Review APS measure	In Both NPC and SPPC, APS made up a majority of the measures discounted in 2025 while the number of other appliances decreased. To ensure that the program channel is not dependent on the success of one measure, the Evaluator recommends that NV Energy and the implementation contractor work with retailers and distributors to increase the sale of energy efficient appliances other than APS.
Deemed Ex-Ante Savings Estimates.	The Evaluator recommends that the implementer estimates ex-ante savings using measure-specific parameters of each measure installed. For multiple measures in 2025, variance between ex-ante and ex-post savings were due to estimated ex-ante savings using a deemed value. Ex-post savings are calculated using record level measure parameters.
New Measures	If there are any measures added to the marketplace, the Evaluator recommends that NV Energy consult with the Evaluator about ex-ante savings estimates before they are added to the marketplace.

2 PROGRAM BACKGROUND

In prior years, channels of the HES program were separated into other NV Energy programs, including the Residential High-Efficiency Air Conditioning ("Res AC") Program, Residential Lighting Program (which was converted in 2022 to an Appliance Rebate Program), the Residential Pool Pumps Program, and the Online Marketplace which was added in 2023. Combining these programs into one multi-channel program streamlined the experience for the customer, who then got access to all rebates and incentives through one platform, thereby increasing both customer awareness and operational efficiency. The 2025 HES program channels are described in the following sections below.

2.1 Residential High-Efficiency Air Conditioning Channel

The 2025 Res AC channel was offered by NPC in its southern Nevada service territory and SPPC in its northern Nevada territory. The Res AC channel is a demand side management ("DSM") program offering manufacturer and distributor rebates for providing various components for heating, ventilation, and air condition ("HVAC") equipment and water heating equipment installations and retrofit services to NV Energy customers. The Res AC channel uses a "midstream" design with incentives being paid to equipment distributors to reduce the point-of-sale cost of high efficiency equipment. The retrofit services specifically aim to benefit NV Energy customers that are consuming higher than average amounts of energy due to inefficient HVAC equipment.

The Res AC channel was originally designed to help customers reduce their energy consumption by incentivizing the installation of high efficiency Air Conditioners ("ACs") or Heat Pumps ("HPs") and providing tune-ups for program participants with free tune-ups for limited income participants. The Res AC channel, which was originally launched in June 2011, was redesigned in 2018 as a midstream distributor program, a departure from previous years. The 2022 program year was the first year with the implementation contractor for the HES Program.

In 2025, Heat Pump Water Heaters ("HPWH") and Cold Climate Heat Pumps ("CCHP") were added to the Res AC channel.

The 2025 program channel provided incentives ranging from $100 to $2,500, depending on the measure and customer category, income qualified or non-income qualified. The incentives were disbursed to distributors who were required to pass 100 percent of the measure incentive dollar amount to the customers. The incentives were distributed after the Res AC channel required documentation was submitted to the implementation contractor. Required documentation included:

- A completed Incentive Request Form; and the following:
    - An invoice that shows model and serial numbers of all newly installed equipment at a given address.
    - The matched Air-Conditioning, Heating, and Refrigeration Institute ("AHRI") reference number(s) for the newly installed equipment.
    - A completed and signed Distributor Agreement (for Midstream Existing Homes).

The submission of Program data for analysis was conducted by raters and installation contractors using the Power Rebate App ("Sightline", an energy efficiency portal customized for NV Energy's PowerShift programs). Training was offered to distributors and installation contractors in the channel's design and expectations, and use of the document submission portal.

The channel consisted of two components in 2025:

1. The retrofit component offered rebates for the installation of:
    1. High efficiency ACs and HPs with a 14.3 seasonal energy efficiency rating 2 ("SEER2") and 7.5 heating seasonal performance factor 2 ("HSPF2") or greater[2].
    2. Heat pump water heater ("HPWH").
    3. Cold Climate Heat Pumps ("CCHP") in SPPC.
2. Tune-Ups: offered rebates for AC/HP tune-up services and free services to qualifying low-income customers.

According to HES program tracking data from NV Energy's program tracking database, a total of 6,728 measures were installed or tuned up as part of this channel during the 2025 program year. The primary contributor to measure counts and estimated savings were the AC tune-ups.

2.2 Residential Pool Pump Channel

NV Energy's Pool Pump Program began in 2007 with a target of installing 3,000 energy efficient variable speed drive ("VSD") pool and spa pumps. NV Energy continued the Program through 2015. The number of VSD pumps incentivized through the Program increased from 75 in 2007 to more than 3,000 in multiple program years. NV Energy discontinued the Program from 2016-2018 but reinstated it in 2019 as part of the DSM portfolio.

In 2023, the Pool Pump Program was incorporated as a channel into the HES program. In 2025, NV Energy offered customers a $150 incentive to recalibrate an existing pump. Authorized installation contractors issued the incentives as discounts at the time of service.

In addition to incentives, customers were also provided information regarding the advantages they would realize from having their VSD pumps recalibrated. These advantages included:

[2] The 2025 program requirements differ from the Federal Baseline, only accepting high efficiency ACs and HPs with a SEER2 of 15.2 or greater and a HSPF2 of 7.8 or greater.

- Saved energy costs.
- When calibrated correctly, the variable speed pump can increase flow rates equal to or greater than a single-speed pump resulting in cleaner and clearer pools.

The implementation contractor negotiated agreements with Pool Pump maintenance contractors and calibrators. Customers who participated in the Pool Pump channel could hire NV Energy-authorized partnered trade allies to calibrate (commission) the energy-efficient Pool Pumps. Two calibrations were offered in 2025, a peak avoidance calibration, and a winterization calibration.

2.3 Residential Appliance Channel

The Appliances channel offered rebates/incentives for the replacement of residential equipment that has reached or exceeded the typical effective useful life ("EUL"). The channel was offered in the NPC and SPPC territories as a DSM program with an "upstream" design. Incentives were paid to retailers, reducing the point-of-sale cost of energy efficient appliances. In 2023 the appliance channel expanded to include an online marketplace offering rebates/incentives for energy saving products directly to NV Energy residential customers through an online e-commerce store. The products offered through the program aimed to encourage NV Energy customers to purchase and install energy efficient measures in their homes.

The 2025 program consisted of the following measures:

- ENERGY STAR® Clothes Washers
- ENERGY STAR® Air Purifiers
- ENERGY STAR® Advanced Power Strips ("APS")
- EBHC (only available in SPPC)

According to program tracking data from NV Energy's program tracking database, a total of 31,037 measures were incentivized in NPC and 23,602 measures in SPPC as part of this program channel in 2025. The primary contributor to measure counts and estimated savings were Advanced Power Strips in NPC and SPPC.

3 M & V METHODOLOGY

This chapter describes the M&V activities that the Evaluator performed for the 2025 HES program. Steps involved in this M&V work were as follows:

- Verified the quantity of measures installed through the program channels.
- Identified the appropriate data needed to calculate HES program energy savings.
- Conducted site visits to verify Cold Climate Heat Pump installations
- Calculated ex-post annual energy savings, first-year energy savings, and critical peak demand reduction attributable to the HES program.

3.1 Residential High-Efficiency Air Conditioning Channel

This section describes the M&V activities that were performed by the Evaluator to evaluate the Res AC channel of the HES program.

3.1.1 General Overview of Measurement Approach

Many DSM portfolios around the United States include programs or program components that target the residential HVAC market. These programs or program components are typically evaluated through one or more of the following methodologies, ordered in increasing level of rigor:

- Partially deemed savings - calculation review based on a Technical Reference Manual ("TRM") or other work paper. This includes engineering calculations.
- Energy simulation coupled with post-only on-site verification.
- Partial or full retrofit isolation with pre-service verification.
- Billing or interval meter data analysis.

Methods that included partially deemed calculations, custom engineering calculations, or energy simulations were always available and could be coupled with verification surveys, inspections, or post-only measurements (such as duct blaster® tests or metering). Methods one through three are often available regardless of the timing of measure installations relative to the cooling or heating seasons. However, these methods may be subject to greater uncertainties regarding baseline conditions or uncertainties inherent in the partially deemed calculation assumptions. For the 2025 evaluation, due to circumstances regarding the scope and timing of implementation and the timing of evaluation activities, methods one and three were used.

Partially deemed savings calculations work well for HVAC measures which have been the focus of many studies over the years. The new equipment installations were evaluated using this approach.

Partial or full retrofit isolation calculations are possible under several conditions, including a test in and test out (pre/post) approach that occurred during all the 2025 HVAC tune-ups. This direct

test data was used to verify the ex-ante savings calculations by the Evaluator.

The 2025 M&V analysis methodologies for each component were based on participation rates, timing of implementation, expected relative impacts of measures to household energy usage, and expected overall contribution to the overall Res AC (Table 3-1).

Table 3-1. Factors Considered in the Choice of Impact Evaluation Protocols

Measure Group	Percentage of Ex-Ante Program Savings	Variability in Expected Savings	Evaluation Priority	Primary Approach
HVAC Installs	1%	Low	Medium	Engineering Calculation
HVAC Tune-Up	98%	Medium	Medium	Pre/Post Engineering Calculation
HPWH Installs	1%	Low	Medium	Engineering Calculation

3.1.2 Ex-Ante and Tracking Data Review

The implementation contractor provided the Evaluator with documentation detailing the source of all ex-ante estimates to be reviewed. Ex-ante impacts were based on industry standard equations cited in the Texas and Arkansas TRMs. For the HVAC tune-ups, each tune-up report was provided to the Evaluator for review.

3.1.3 Data Collection and Verification

The Evaluator met with the implementation contractor and NV Energy bi-weekly over the course of 2025 to resolve any issues within the program tracking database. Typical data fields within the tracking data included:

- Dwelling type (single-family or multi-family)
- HVAC system type (AC, HP, Gas Furnace, or AC with electric resistance heating)
- Program component
- Measure unit characteristics such as make, model, capacity, and efficiency
- Measure completion dates
- Measure rebate amounts
- Ex-ante kWh savings

3.1.4 AC / HP Installation

For the ex-post analysis of the AC and traditional HP Program channel measurements, an industry standard engineering equation found in the Arkansas TRM version 8.1 was employed to determine savings for the new installation of AC and HP units. For the 2025 evaluation, the Evaluator used the previous ten years of evaluation data on the $EFLH_c$ and $EFLH_h$ to estimate NPC and SPPC

specific deemed values. The form of the energy savings calculation was:

$$Annual\ kWh\ Savings = CAP_{Cool} \times EFLH_c \times \left(\frac{1}{SEER2_{base}} - \frac{1}{SEER2_{new}}\right) + CAP_{heat} * EFLH_h * \left(\frac{1}{HSPF2_{base}} - \frac{1}{HSPF2_{new}}\right)$$

Equation 1

Where:

CAP_{Cool}	=	Unit Cooling Capacity, kBTU/hr
$SEER2_{new}$	=	Seasonal Energy Efficiency Ratio (New Unit), measured for each AC and HP.
$EFLH_c$	=	Equivalent Full Load Hours (Cooling), determined to be 1140 in NPC and 339 in SPPC
$SEER2_{base}$	=	Seasonal Energy Efficiency Ratio (Old Unit), determined to be 14.3.
CAP_{heat}	=	Unit Heating Capacity, kBTU/hr
$EFLH_h$	=	Equivalent Full Load Hours (Heating), equals zero for AC measures and 609 for HP measures in NPC and 960 in SPPC.
$HSPF2_{base}$	=	Heating Seasonal Performance Factor 2 (Old Unit), determined to be 7.5.
$HSPF2_{new}$	=	Heating Seasonal Performance Factor 2 (New Unit), measured for each HP.

The baseline 14.3 SEER2 and 7.5 HSPF2 values were dictated by the 2023 update of the federal minimum efficiency requirements for small AC and HP units.

3.1.5 AC / HP Tune-Up

HVAC Tune-Ups performed for the Program were evaluated using an industry standard engineering equation found in the Arkansas TRM version 8.1 shown below. The tune-up reports provided to the Evaluator contained the HP and AC pre/post tune-up parameters to input into the following engineering calculation.

$$Annual\ kWh\ Savings = Annual\ kWh\ Savings, C + Annual\ kWh\ Savings, H$$

Equation 2

$$Annual\ kWh\ Savings, C = CAP_{cool} \times EFLH_c \times \left(\frac{1}{EER_{pre}} - \frac{1}{EER_{post}}\right)$$

Equation 3

$$\textit{Annual kWh Savings, } H = CAP_{heat} \times EFLH_h \times \left(\frac{1}{HSPF_{pre}} - \frac{1}{HSPF_{post}}\right)$$

Equation 4

Where:

CAP_{cool}	=	Unit Cooling Capacity, measured for each treatment home, tons.
CAP_{heat}	=	Unit Heating Capacity, measured for each treatment home, tons.
$EFLH_c$	=	Equivalent Full Load Hours (Cooling),1140 for NPC and 339 for SPPC
EER_{post}	=	Energy Efficiency Ratio (Post-Installation), measured for each AC and HP.
$EFLH_h$	=	Equivalent Full Load Hours (Heating), equals zero for AC measures and 609 for HP measures in NPC and 960 for HP measures in SPPC.
EER_{pre}	=	Energy Efficiency Ratio (Pre-Installation), measured for each AC and HP.
$HSPF_{pre}$	=	Efficiency of heating equipment, measured for each HP
$HSPF_{post}$	=	Efficiency of heating equipment, measure for each HP

3.1.6 ENERGY STAR® Heat Pump Water Heater

Heat Pump Water Heaters were incorporated into the Res AC channel in 2025. Although previously offered through the residential appliance channel, they aligned more effectively with the Res AC channel due to the downstream installation requirements and the need for stronger coordination between the implementation contractor and installation partners. The Evaluator estimated kWh savings for the replacement of HPWHs as described in the Arkansas TRM Version 9.0 (Volume 2, pages 128-129) shown in the equations below.

$$kWh_{savings} = \frac{p \; x \; C_p \; x \; V \; x \; (T_{set\ point} - \; T_{supply}) x \left(\frac{1}{UEF_{base}} - \left(\frac{Adj}{(UEF_{post} \; x \; (1 + PA\%)}\right)\right)}{3{,}412}$$

Equation 5

$$PA\% = \; 0.00008 \; x \; T_{amb}^3 \; x \; 0.0011 \; x \; T_{amb}^2 - 0.4833 \; x \; T_{amb} + 0.0857$$

Equation 6

Where:

p	=	Water density, 8.33 lb/gal
C_p	=	Specific heat of water, 1 BTU/lb. °F
V	=	Estimated hot water use[3]
$T_{set\ point}$	=	Water heater set point, 124 °F
T_{supply}	=	Average water supply temperature, Table 3-2
UEF_{base}	=	Baseline Uniform Energy Factor for 50-gal electric storage tank water heater with medium draw, 0.9
UEF_{post}	=	Uniform Energy Factor of new HPWH
$PA\%$	=	Performance adjustment to adjust the HPWH UEF relative to ambient air temperature, NPC, 0.065, SPPC, -0.017
T_{amb}	=	Ambient temperature of HPWH in an unconditioned space, NPC, 77.5 °F, SPPC, 69.0 °F[4]
Adj	=	HPWH specific adjustment to account for cooling bonus and heating penalty on an annual basis, 1.065[5]
$3{,}412$	=	Conversion constant from BTU to kWh

Table 3-2. Average Water Main Temperature

IECC Climate Zone[6]	Average Water Main Temperature (degrees Fahrenheit)[7]
5B Las Vegas	72.8
12B Reno	56.5

3.1.7 ENERGY STAR® Cold Climate Heat Pump

Cold Climate Heat Pumps were introduced into the SPPC Res AC channel in 2025. CCHP's differ from traditional HPs due to their increased heating capacity at low temperatures. ENERGY

[3] Conservative estimate from the PA TRM, Table 2-46

[4] ASHRAE: Standard 152-2014 Table 6.1b and 6.2b

[5] Average of all Arkansas Climate Zones for an unconditioned space. AR TRM Table 150: HPWH Adjustment

[6] For Nevada's International Energy Conservation Code ("IECC") climate zones, please refer to Appendix B.

[7] Average water main temperature is calculated using eq. 108 from the Arkansas TRM Version 8.2 and climate data from https://www.usclimatedata.com

STAR® requirements for CCHPs include a SEER2 ≥15.2 and an HSPF2 ≥8.1[89]. Since this was a new measure in 2025, the Evaluator conducted site visits at participant homes to verify the installation of CCHP and collect the following data:

- Baseline heating and cooling equipment type
- Baseline Heating fuel type (gas or electric)
- Verify indoor and outdoor model numbers
- Verify heat pump type (ducted or ductless)
- If gas heating, verify the balance point.

The site visit results are explained in more detail in Appendix B: Cold Climate Heat Pump Analysis. In 2025, 17 CCHPs were installed in SPPC and the Evaluator visited 13 sites.

The Evaluator calculated CCHP kWh savings following the NY TRM v13 shown in Equation 7. The NY TRM provides a CCHP-specific methodology and accommodates both gas and electric baseline conditions, making it well-suited for this measure. Model specific parameters and site-specific data collected during the site visits informed the kWh calculations.

$$kWh\ Savings = \left(\left(\frac{CAP_{cool}}{100} \times \left(\frac{1}{SEER2_{base}} - \frac{1}{EER2_{season,ee}}\right) \times EFLH_c \times F_{load,cooling}\right) + \left(\frac{CAP_{heat}}{1000} \times \left(\frac{F_{ElecHeat}}{COP_{season,baseline}} - \frac{1}{COP_{season,ee}}\right) \times \frac{1}{3.412} \times EFLH_h \times F_{load,heating}\right)\right)$$

Equation 7

$$EER2_{season,ee} = c + d \times SEER2$$

Equation 8

$$\mathrm{COP}_{\mathrm{season,ee}} = a + b \times HSPF2 \times \frac{1}{3.412}$$

Equation 9

Where:

[8] U.S. Environmental Protection Agency. ENERGY STAR Program Requirements for Central Air-Conditioners and Heat Pumps – Product Specification Version 6.2 (Rev. March 2025). ENERGY STAR. March 2025. Table 3, pg. 4.

[9] The 2025 program requirements differ from the ENERGYSTAR®, requiring an HSPF2 of 8.5 or greater.

CAP_{Cool}	=	Unit Cooling Capacity (BTU/hr)
$SEER2_{base}$	=	Electric cooling Seasonal Energy Efficiency Rating of the baseline unit
$EER2_{season,ee}$	=	Seasonally adjusted average energy efficiency (BTU/watt-hour), Equation 8
$EFLH_c$	=	Equivalent Full Load Hours (Cooling), determined to be 339 in SPPC
$F_{load,cooling}$	=	Adjustment factor to account for the portion of seasonal cooling load met by heat pump, 100%
CAP_{heat}	=	Unit Heating Capacity (BTU/hr)
$F_{ElecHeat}$	=	Electric heating factor to account for the presence or absence of a baseline electric heating system. Electric baseline, 1, otherwise 0
$COP_{season,baseline}$	=	Seasonally adjusted Coefficient of Performance of the baseline equipment. Electric resistance, 1, otherwise 0
$COP_{season,ee}$	=	Seasonally adjusted Coefficient of Performance of the efficient equipment, Equation 9
$EFLH_h$	=	Equivalent Full Load Hours (Heating), 960 in SPPC.
$F_{load,heating}$	=	Adjustment factor to account for the portion of seasonal heating load met by heat pump, 79%[10]
c & d	=	Coefficient to represent offset and slope to determine seasonal cooling efficiency, see Table 3-4
$SEER2$	=	Seasonal Energy Efficiency Ratio of the efficient unit
a & b	=	Coefficient to represent offset and slope to determine seasonal heating efficiency, see Table 3-4
$HSPF2$	=	Heating Season Performance factor of the efficient unit

Table 3-3. Coefficients for Seasonal Heating and Cooling Efficiency[11]

Parameter	Coefficient
c	-7.61427
d	1.38700
a	0.51415
b	0.64033

3.1.8 $EFLH_c$ and $EFLH_h$ Calculations

For the 2025 program year, the EFLH values that the Evaluator recommended be set as the deemed set and were accepted in the 2022 M&V Report, were used for the ex-post calculations. Table 3-4 below details these values.

Table 3-4. NPC and SPPC Effective Full Load Hours

Territory	$EFLH_c$ (hr/yr)	$EFLH_h$ (hr/yr)
NPC	1,140	609
SPPC	339	960

3.1.9 EUL and Lifetime Savings

The Evaluator calculated the lifetime savings for the installed measures by multiplying annual savings by the EULs in Table 1-3 and Table 1-4 above, which are industry standard and agreed upon by the implementation contractor, the Evaluator, and NV Energy at the start of the program year.

3.1.10 Calculation of Critical Peak Demand Savings

The critical peak demand period per month was defined as the hour in each month when the system load was most likely to reach a critical peak. The critical peak demand hour per month is shown below in Table 3-5 for NPC and SPPC. The summer critical peak demand period was defined as the maximum demand found in the hour ending at 16:00 or 17:00 hours in July or August 2025.

[10] Percentage of time in a year below 35 degrees Fahrenheit. See Appendix B: Cold Climate Heat Pump Analysis

[11] The seasonal cooling coefficients were modified from Massena, NY to Reno, NV using a cooling degree day ratio. Similarly, the heating coefficients were modified from Buffalo, NY to Reno, NV using a heating degree day ratio.

Table 3-5. Critical Peak Demand Hour per Month, NPC

Month	NPC Peak Hour(s)	SPPC Peak Hour(s)
January	19, 20	17, 18
February	19, 20	18, 19
March	20	19, 20
April	20	20
May	17, 18	20
June	16, 17	16, 17
July (potential summer peak and annual peak)	16, 17	16, 17
August (potential summer peak and annual peak)	16,17	16, 17
September	17	16, 17
October	18, 19	18, 19
November	18, 19	17, 18
December	18, 19	17, 18

Peak kW demand reduction was calculated using hourly energy savings curves ("curves") consisting of 8,760 hourly data points throughout the year, which reflect the average percent savings associated with a given measure at a given time. The Evaluator developed curves for AC, HP, and HPWH energy savings, efficient AC units only save energy during cooling periods, while HPs and HPWHs save energy year around. The development of these curves can be done in various ways, from interval meter analyses with typical meteorological year ("TMY3") weather data, to setting up monitoring equipment at a statistically significant sample of sites to measure true power consumption. The 2025 Res AC demand savings calculations utilized savings curves developed in 2023. The 2025 AC and Heat Pump savings curves used localized 2021 and 2022 cooling degree days ("CDD") and heating degree days ("HDD") calculations to determine times of HVAC consumption, and consequentially, times of HVAC savings. The final curves allowed for the disaggregation of the annual kWh savings into hourly bins that were then used to identify the peak load reduction at a given hour and day. Additional details were provided in "Technical Appendix to Measurement & Verification ("M&V") Reports for NV Energy's 2025 Demand Side Management ("DSM") Program".

3.2 Residential Pool Pump Channel

This section provides descriptions of the methods the Evaluator used to complete the M&V work for the Pool Pump channel of the HES Program. Steps involved in the work included the following:

- Verifying the numbers of VSD pool pumps recalibrated through the program channel.
- Identifying the appropriate data needed to calculate energy savings.

- Calculating ex-post annual energy savings, first-year energy savings, and critical peak demand reduction attributable to Pool Pumps.

3.2.1 Review of Program Tracking Data

The following data was included in NV Energy's program tracking database for participants:

- Premise ID
- Calibration date
- Calibration type
- Pre/post pump high-speed wattage (calibration)
- Pre/post pump low-speed wattage (calibration)
- Pre/post pump low-speed setting hours per day (calibration)
- Pre/post pump high-speed setting hours per day (calibration)

The Evaluator examined the program tracking data for duplicate or erroneous entries and data entered in wrong fields and other inconsistencies. After this cleaning, tracking data was confirmed for 42 peak avoidance recalibrations of existing pumps, and 2,273 winterization recalibrations of existing pumps.

3.2.2 Energy Savings Calculations

Two types of VSD pool pump calibrations were performed in 2025, peak avoidance and winterization. Both calibrations ensure that the pump schedule and speed is calibrated to the size of the pool and operates optimally to save energy.

Peak avoidance calibrations were offered from April 1st to September 30th of 2025. The implementation of a peak avoidance calibration reduces energy load during peak summer hours by changing the pump runtimes to avoid 3pm to 7pm without affecting proper flow speeds. Winterization calibrations were offered from September 1st to November 30th of 2025. Winterization calibrations reduce the number of "turnovers" (the ratio of the total volume pumped per day to the pool volume) for a residential pool during low usage winter months while maintaining cleanliness and water quality.

Annual kWh savings were estimated for each calibrated VSD pool pump using the agreed upon engineering calculation described in the following section.

3.2.2.1 Recalibrated VSD Pool Pump Engineering Analysis Methodology

VSD pool pump recalibration annual kWh savings were estimating using Equation 10. The implementation contractor verified that participants in the 2025 program did not receive a previous calibration within one year of the 2025 calibration date. An agreed upon 1-year EUL was used in the winterization pool pump calibration savings estimates while an EUL of 2 years was used for

peak avoidance pool pump calibrations.

$$Annual\ Energy\ (kWh)\ Savings$$
$$= \big(((PLw * PLhpd) + (PHw * PHhpd)\big)$$
$$- \big((NLw * NLhpd) + (NHw * NHhpd)\big) * \frac{Days}{Year})/1000$$

Equation 10

Where:

PLw	=	Previous Low-Speed Watts
$PLhpd$	=	Previous Low-Speed Hours per Day
PHw	=	Previous High-Speed Watts
$PHhpd$	=	Previous High-Speed Hours per Day
NLw	=	New Low-Speed Watts
$NLhpd$	=	New Low-Speed Hours per Day
NHw	=	New High-Speed Watts
$NHhpd$	=	New High-Speed Hours per Day
$\frac{Days}{Year}$	=	The days the pump was operated in a year (365 days for peak avoidance recalibrations and 242 days for winterization recalibrations).

3.2.2.2 Determining the Energy Savings Curve

To allocate kWh savings per month per rate class and kW demand reduction per month per rate class, the Evaluator used the 2021 program year Pool Pump savings curve. The 2021 treatment group's meter data was used to create this savings curve. The smart meter-data captured each treatment group member's actual usage during each hour of 2021. First, the 15-minute data was summed across the four 15-minute intervals of each hour to create 8,760 energy usage values for each treatment group member during 2021. Next, the data set was aggregated to average across the treatment group to arrive at a single time-series consisting of 8,760 values. The time-series was then normalized by dividing each value by the sum of the time-series. The resulting normalized annual savings curve is illustrated in Figure 3-1.

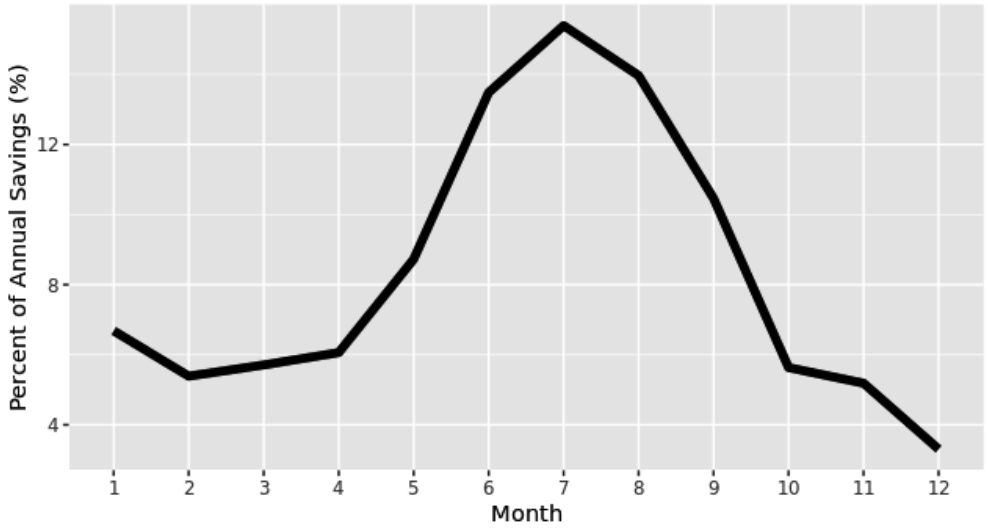


Figure 3-1. Annual Savings Curve for the 2025 Pool Pump Program

For the 2025 population of pool pumps, the daily energy savings curve for an average day during the peak avoidance months is illustrated in Figure 3-2.

For a more in-depth discussion of energy savings curves, see the "Technical Appendix to Measurement & Verification (M&V) Reports for NV Energy's 2025 Demand Side Management (DSM) Programs,". The M&V topics described in this technical appendix include the Evaluator's's calculation methodology for critical peak demand savings and the Evaluator's determination of monthly energy savings per rate class.

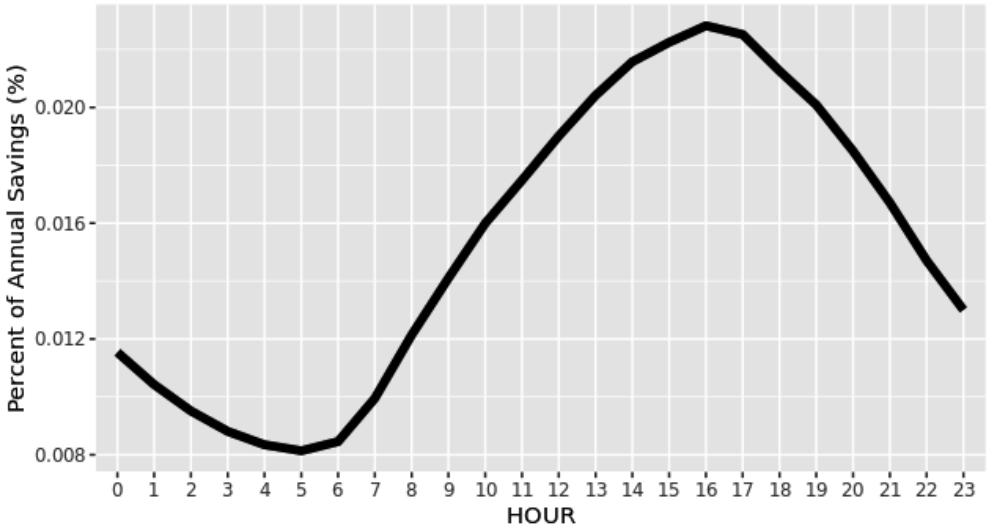


Figure 3-2. Average Peak Period Daily Savings Curve

3.2.2.3 Calculation of First-Year kWh Savings

First-year kWh savings were calculated by determining what percentage of the 2025 program year remained when each measure was installed. The Evaluator used measure install data from NV Energy's program tracking database to calculate how many days were left in the 2025 program year as of the measure install date. For each measure, the number of days remaining in the year was then used along with the normalized energy savings curve described above to determine the share of annualized kWh savings realized during the 2025 calendar year. First-year kWh savings were summed by month across each customer rate class in the Pool Pump population to determine first-year kWh savings per month per rate class. First-year kWh savings are provided in Appendix A.

3.2.2.4 Calculation of Critical Peak Demand (kW) Reduction

Critical peak demand (kW) savings are calculated by month and by rate class using ex-post Program savings determinations and appropriate measure-level 8,760-hour energy savings curves. For each 2025 participant in this program, ex-post annualized energy savings per measure is allocated to the participant's rate class and the specific energy savings curve for that measure. The result is a two-dimensional matrix providing per rate class savings per hour for all 8,760 hours of the typical calendar year. The results are then inspected for each month to identify the maximum average hourly demand per month as shown in Figure 3-1. Summer critical peak demand reduction is defined as the maximum kW reduction that could be expected during any day during 2025 either hour ending at 16:00, 17:00, or 18:00 PM in July or either hour ending at 16:00 or 17:00 PM in August.

Complete ex-post critical peak demand (kW) savings by month and by rate class are provided in Appendix A. For more information on how the Evaluator calculates summer critical peak demand, please see "Technical Appendix to Measurement & Verification (M&V) Reports for NV Energy's 2025 Demand Side Management (DSM) Programs."

3.3 Residential Appliance Channel

This section provides descriptions of the methods the Evaluator used to complete the M&V work for the Appliances channel of the HES Program.

3.3.1 Ex-Ante and Tracking Data Review

The implementation contractor provided the Evaluator with model numbers and installation dates for each measure sold in the residential appliance channel to inform kWh and peak kW savings estimates. Ex-post impacts were based on industry standard equations cited in the Arkansas TRM, Pennsylvania TRM, and the Regional Technical Forum. For EBHC, a participant survey also informed the annual kWh savings estimates.

The Evaluator reviewed and verified all measures incentivized through the residential appliance channel, verifying model numbers and reviewing ex-ante kWh estimates.

3.3.2 ENERGY STAR Electric Clothes Washer

The Evaluator utilized deemed savings estimates for the replacement of electric Clothes Washers from the Arkansas TRM (Volume 2, page 164) based on the configuration of the efficient washer and the water heating fuel type. Since this was an upstream program, and actual parameters needed in the calculations were unknown, the baseline configuration was assumed to be a top loading Clothes Washer, and the dryer fuel type was assumed to be electric by the implementation contractor. The water heating fuel type percentage was derived from the 2016 NV Energy Residential Appliance Saturation Survey ("RASS") Report Volume 1[12] for NPC and SPPC territories. The deemed savings estimate and water heating fuel type percentages are shown in Table 3-6 and Table 3-7.

Table 3-6. Clothes Washer Deemed Savings

Baseline Configuration	Efficient Configuration	Dryer Fuel Type	Water Heater Fuel Type	Annual Savings (kWh)	Annual Savings (kW)
Top	Top	Electric	Electric	153	0.0150
Top	Front	Electric	Electric	275	0.0270
Top	Top	Electric	Gas	62	0.0061
Top	Front	Electric	Gas	122	0.0120
Top	Top	Gas	Electric	114	0.0112
Top	Front	Gas	Electric	191	0.0188
Top	Top	Gas	Gas	23	0.0023
Top	Front	Gas	Gas	38	0.0037

Table 3-7. 2016 RASS Survey Water Heating Fuel Type Percentages[13]

Fuel Type	NPC	SPPC
Gas	69%	69%
Electric	29%	21%

3.3.3 ENERGY STAR Room Air Purifier

Qualus utilized deemed kWh energy savings for replacement of Room Air Purifiers as described in the Regional Technical Forum ("RTF"): Residential Air Purifiers V2.1[14]. This method was

[12] Public Utilities Commission reference number: 597d2274-c7fd-4ad7-94b1-d830881ccde0

[13] Percentages may not total 100% due to other water heating fuel types including solar, propane, or oil.

[14] https://rtf.nwcouncil.org/measure/energy-star-air-purifiers/

agreed upon by the implementer, the Evaluator and NV Energy and is shown in Table 3-8.

Table 3-8. Annual Energy Savings by Clean Air Delivery Rate ("CADR")

CADR	Annual Savings (kwh)	Annual Savings (kW)
30 ≤ Smoke CADR < 100	99	0.01
100 ≤ Smoke CADR < 150	140	0.02
150 ≤ Smoke CADR < 225	151	0.02
Smoke CADR ≥ 225	200	0.02

3.3.4 Advanced Power Strip

The Evaluator calculated kWh savings for APS as described in the Arkansas TRM 8.1 (Volume 2, page 181). Since this is an upstream channel, the type of system devices that are plugged into the advanced power strip are unknown. For this reason, the Evaluator used an average deemed savings estimate for a 5-plug APS in use in home office or home entertainment system shown in Table 3-9 below. Since this is an upstream measure and in-service-rate ("ISR") is also unknown, an ISR of 98 percent was applied.[15]

$$kWh_{savings} = \sum((W_i \times H_i))/1000$$

Equation 11

Table 3-9. Average APS Deemed Energy Saving

System Type	Annual Savings (kWh)	Annual Savings (kW)
Average APS Savings for Entertainment and Office Devices	167.4	0.019

3.3.5 Engine Block Heater Controllers

This section provides a description of the methods the Evaluator used to complete the M&V analysis for the Engine Block Heater Controller measure of the residential appliances channel. Steps involved in the work included the following:

- Verifying the numbers of EBHC distributed through the residential appliances channel.
- Identifying and collecting the appropriate data needed to calculate energy savings.
- Calculating ex-post annual energy savings, first-year energy savings, and critical peak demand reduction attributable to EBHC.

[15] APS ISR was derived from the 2024 Low-Income M&V Survey Results

For diesel engines to start properly, they must be at a certain temperature, engine block heaters are used to warm the engine in cold conditions. Typically, these heaters are turned on at night and left running until the vehicle is needed the following day, EBHC's save energy by reducing the time a diesel engine block heater is running based on the ambient temperature and the time that a vehicle will need to be started. Up to two EBHC's were provided to qualifying residential NV Energy customers at no charge. The implementer distributed EBHC through an email campaign directed towards SPPC residential customers with information on how to receive an EBHC at no cost.

3.3.5.1 Data Collection and Verification

The implementer administered a survey during the distribution of the EBHC's to collect the following data that informed ex-post savings estimates.

- Verify that EBHC's were only delivered to SPPC territory customers.
- Verify that qualifying customers had a diesel vehicle.
- Determine baseline usage of existing engine block heaters without controller.
- Determine what month of the year participants begin using existing engine block heaters and what month of the year participants stop using existing engine block heaters.
- What hours of the day do participants use existing engine block heaters.
- Determine the geographic location that EBCH's will be used.

The Evaluator utilized Typical Meteorological Year X ("TMYx") temperature data for four locations in northern Nevada, Tonopah, Elko, Reno, and Winnemucca. These locations were chosen based on information from the distribution survey described above. The number of survey responses from each location and level of precision is shown in Table 3-10 below.

Table 3-10. Engine Block Heater Controller Survey Responses

Weather Location	Survey Responses	Quantity Distributed	Precision
Tonopah	10	17	80/15
Elko	43	79	90/10
Reno	682	1162	90/10
Winnemucca	35	62	90/11
Total	**770**	**1,320**	**N/A**

The total quantity of EBHC's distributed through the residential appliance program was 1,320. The implementer administered 770 surveys for all of the measures at the time of distribution, resulting in 90/10 precision at two of the four weather locations.

The Evaluator also conducted a participant survey of 2024 participants to inform the 2025 energy savings calculation. The Evaluator developed the survey instruments in collaboration with NV

Energy and the implementation contractor to determine an ISR and the mode participants used during the 2024-2025 winter season.

3.3.5.2 Sampling Plan

Sampling is a statistical process whereby the evaluator selects and evaluates a subset of participants that the evaluator has determined to represent the whole population of participants. The required statistical confidence interval for the 2025 program was precision of ±10 percent at the 90 percent confidence level, also called "90/10 confidence." The sample size needed to satisfy the 90/10 confidence requirement was calculated using Equation 12.

$$n = \{z \times c.v./r.p.\}^2$$

Equation 12

Where:

- n = Number of sample points to be taken from the population
- $c.v.$ = Coefficient of variation
- $r.p.$ = Relative precision
- z = Value associated with a specified confidence level; for the 90% confidence level, z = 1.645

Given the specified confidence interval, the required sample size depends on the coefficient of variation ("c.v.") for the variable of interest. The Evaluator used a c.v. of 0.5 to calculate the 2025 sample size. The Evaluator determined that at least 68 sample sites were needed to achieve 90/10 confidence.

The Evaluator met the target of 90/10 confidence for the online survey of participants, achieving 202 survey responses for the 2025 program year. The survey asked participants about their EBHC usage to determine an ISR. The ISR is calculated by dividing the number of EBHC's that survey participants said were in use by the total number of EBHC's received by surveyed participants The ISR was determined to be 79 percent. The survey found that 65 percent of participants used the *timed ready mode* while 35 percent of participants used the *maintain ready mode*. Both findings were included in the ex-post savings calculations.

3.3.5.3 Energy Savings Calculations

The Evaluator calculated kWh savings for the implementation of EBHC's following the RTF: Engine Block Heater Controls v3.1[16]. Model specific data, data collected from survey efforts, and

[16] https://rtf.nwcouncil.org/measure/engine-block-heater-controls/

northern Nevada specific weather data also informed the kWh calculations.

All EBHC's distributed through the residential appliance program were a single manufacturer and model, the Power Badger Model 1800US, an extension cord type EBHC. The RTF has guidance for estimating kWh savings from engine mounted and wall mounted EBHC's. Since the Power Badger Model 1800US works in a similar way to both the wall mounted and engine mounted EBHC's, the Evaluator obtained the model specific savings curve from Power Badger to input into the RTF evaluation framework. The savings curve is a linear function that calculates the required start time based on the ambient temperature.

The Power Badger Model 1800US has two mode settings, *timed ready* and *maintain ready*. Using the *timed ready mode*, participants would set the desired time that the vehicle is required to start and the Power Badger Model 1800US will calculate how many hours are necessary to send power to the engine block heater based on the temperature for proper ignition of the vehicle. The *maintain ready mode* utilizes the outside temperature to calculate the amount of power to send to the engine block heater so the vehicle is always ready to start. The *maintain ready mode* saves energy by reducing the amount of power sent to the engine block heater in warmer temperatures.

The schedule of use for the EBHC measure was informed by the distribution survey. Analysis of the survey data showed that participants start using an engine block heater in November and stop using an engine block heater at the end of March. The survey analysis also provided the daily schedule. The RTF baseline schedule showed that engine block heaters use begins at 5PM and ends at 9AM. The distribution survey showed that time of day use of engine block heaters was not as rigid as the RTF assumed. The Evaluator utilized the RTF schedule supplemented with survey results which showed the percentage of participants using engine block heaters at any given hour. The survey results are shown in Table 3-11 below.

Table 3-11. Engine Block Heater Controller Screening Survey Results

Hour of Day	Survey Percentage of Hourly Usage	RTF Daily Schedule
1	55%	100%
2	59%	100%
3	61%	100%
4	65%	100%
5	69%	100%
6	70%	100%
7	61%	100%
8	43%	100%
9	25%	0%
10	16%	0%
11	10%	0%
12	8%	0%
13	8%	0%
14	8%	0%
15	8%	0%
16	8%	0%
17	10%	100%
18	16%	100%
19	25%	100%
20	33%	100%
21	42%	100%
22	48%	100%
23	54%	100%
24	55%	100%

Energy Savings calculations were estimated at four locations in northern Nevada, Tonopah, Elko, Reno, and Winnemucca using TMYx temperature data and the schedule described above. The Power Badger Model 1800US timed ready and maintain ready mode savings curves were also used. Energy savings were calculated using Equation 13 and Equation 14 below at each weather location. A weighted average kWh saving based on survey response was used as the final kWh savings estimate, shown in Table 3-12 below.

$$kWh_{savings} = (kWh_{baseline} - kWh_{efficeint})\ x\ ISR$$

Equation 13

$$kWh_{efficeint} = (kWh_{timed}\ x\ F_{timed}) + (kWh_{maintain}\ x\ F_{maintain})$$

Equation 14

Where:

$kWh_{baseline}$	=	kWh usage without an EBHC
$kWh_{efficient}$	=	kWh usage with an EBHC
kWh_{timed}	=	Timed ready mode kWh usage
$kWh_{maintain}$	=	Maintain ready mode kWh usage
F_{timed}	=	Percent of participants using timed ready mode
	=	65 percent
F_{timed}	=	Percent of participants using maintain ready mode
	=	35 percent
ISR	=	In-service rate
	=	79 percent

Table 3-12. Engine Block Heater Controller kWh Energy Savings

Weather Location	Energy Savings kWh[17]	Survey Response Count
Tonopah	665	10
Elko	624	43
Reno	711	682
Winnemucca	657	35
Weighted Average		554

3.3.6 Calculation of Critical Peak Demand Savings

Peak kW demand reduction was calculated using hourly energy savings curves ("curves") consisting of 8,760 hourly data points throughout the year, which reflect the average percent savings associated with a given measure at a given time. The appliance program developed curves

[17] kWh savings for each location with mode percentage and ISR applied

for all appliance measures in this section. The development of these curves can be done in various ways, from interval meter analyses with TMY3 weather data, to setting up monitoring equipment at a statistically significant sample of sites to measure true power consumption. Details that inform how PY2025 appliance savings curves were developed are provided in "Technical Appendix to Measurement & Verification ("M&V") Reports for NV Energy's 2025 Demand Side Management ("DSM") Program".

4 M&V RESULTS

This section presents the M&V analysis findings from the impact evaluation of the HES program, results are broken out by channel.

4.1 Residential High-Efficiency Air Conditioning Channel

This subsection provides detailed M&V results pertaining to the ex-post energy impacts of the Res AC channel during 2025.

4.1.1 Energy Impacts and Variances

Table 4-1 and below presents ex-ante and ex-post energy savings, along with program realization rates, for each of the channel components. The Res AC channel resulted in estimated ex-ante savings of 5,440,005 kWh in NPC and 491,825 kWh in SPPC. After completing M&V activities and analyses, the Evaluator determined ex-post verified savings to be 6,112,070 kWh in NPC and 243,237 in SPPC; thus, the realization rate was 112 percent and 49 percent respectively.

Table 4-1. NPC Annual Energy Impact Summary

Project Type	Building Type	Measure Name	Total Installs	Annual Energy Savings (kWh)		Realization Rate
				Ex-Ante	Ex-Post	
Low Income Program	Single Family	AC Tune-Up	151	238,206	171,395	72%
		HP Tune-Up	14	22,085	23,619	107%
	Multifamily	AC Tune-Up	930	969,413	957,353	99%
		HP Tune-Up	606	631,682	805,016	127%
Retrofit	Single Family	AC Tune-Up	599	793,579	776,689	98%
		HP Tune-Up	35	46,369	69,135	149%
		AC Replacement	184	70,862	82,132	116%
		HP Replacement	62	43,449	34,583	80%
		HPWH Replacement	9	16,143	14,712	91%
	Multifamily	AC Tune-Up	1,164	1,137,065	1,140,718	100%
		HP Tune-Up	1,506	1,471,151	2,036,719	138%
Totals			**5,260**	**5,440,005**	**6,112,070**	**112%**

Table 4-2. SPPC Annual Energy Impact Summary

Project Type	Building Type	Measure Name	Total Installs	Annual Energy Savings (kWh)		Realization Rate
				Ex-Ante	Ex-Post	
Retrofit	Single Family	AC Tune-Up	101	31,302	22,953	73%
		CCHP Replacement	16	56,283	-77,998	-139%
		HPWH Replacement	14	32,214	29,253	91%
	Multifamily	AC Tune-Up	1,335	368,233	272,479	74%
		HP Tune-Up	1	276	796	289%
		HP Replacement	1	3,518	-4,245	-121%
Totals			**1,468**	**491,825**	**243,237**	**49%**

Realization rates for the 2025 program year were lower than the previous program year in both NPC and SPPC. Similar to the 2023 and 2024 program years, SPPC savings were driven by AC tune-ups in multifamily homes, representing 75 percent of ex-ante savings in SPPC. The Res AC program savings in NPC were driven by AC tune-ups and HP tune-ups, representing 48% of overall ex-ante savings.

The realization rate of 112 percent for NPC was due to the HP tune-up categories having high realization rates across all building types and project types. Within each tune-up category, the realization rates varied from zero percent to 370 percent based on the input parameters used to estimate ex-post energy savings. Two HP tune-ups did not receive ex-post cooling savings since the EER pre and EER post parameters were not provided in the reported data, while one HP tune-up did not receive any ex-post savings due to not having any cooling or heating test-in/test-out data. The ex-ante savings used deemed values for heat pump and AC tune-ups while ex-post savings used model specific parameters.

The overall realization rate for the SPPC program was 49 percent, which was driven by the CCHP replacements. The CCHP measure was new in 2025 and is discussed in further detail in Appendix B: Cold Climate Heat Pump Analysis. Another contributing factor to the low realization rate was the multifamily AC tune-ups. The ex-ante deemed savings values were based on a 2.5-ton AC unit while the majority of participants had smaller AC units. Of the 1,335 multifamily AC tune-ups, 1,149 were 1.5- or 2.0-ton AC units.

Table 4-3 and Table 4-4 below summarize the average ex-post savings per unit, EUL, and lifetime energy savings. The Res AC channel resulted in lifetime savings of 32,047,451 kWh in NPC and 540,015 in SPPC.

Table 4-3. NPC Res AC Lifetime Ex-Post Energy Savings Summary

Project Type	Building Type	Measure Name	Total Installs	Ex-Post kWh	Average Ex-Post kWh Savings Per Install	Effective Useful Life (EUL), Years	Ex-Post Lifetime Energy Savings (kWh)
Low Income Program	Single Family	AC Tune-Up	151	171,395	1,135	5	856,974
		HP Tune-Up	14	23,619	1,687	5	118,095
	Multifamily	AC Tune-Up	930	957,353	1,029	5	4,786,763
		HP Tune-Up	606	805,016	1,328	5	4,025,081
Retrofit	Single Family	AC Tune-Up	599	776,689	1,297	5	3,883,444
		HP Tune-Up	35	69,135	1,975	5	345,675
		AC Replacement	184	82,132	446	18	1,478,370
		HP Replacement	62	34,583	558	15	518,742
		HPWH Replacement	9	14,712	1,635	10	147,123
	Multifamily	AC Tune-Up	1,164	1,140,718	980	5	5,703,590
		HP Tune-Up	1,506	2,036,719	1,352	5	10,183,594
Totals			**5,260**	**6,112,070**	**1,162**	**5.2**	**32,047,451**

Table 4-4. SPPC Res AC Lifetime Ex-Post Energy Savings Summary

Project Type	Building Type	Measure Name	Total Installs	Ex-Post kWh	Average Ex-Post kWh Savings Per Install	Effective Useful Life (EUL), Years	Ex-Post Lifetime Energy Savings (kWh)
Retrofit	Single Family	AC Tune-Up	101	22,953	227	5	114,765
		CCHP Replacement	16	-77,998	-4,875	15	-1,169,975
		HPWH Replacement	14	29,253	2,089	10	292,526
	Multifamily	AC Tune-Up	1,335	272,479	204	5	1,362,393
		HP Tune-Up	1	796	796	5	3,980
		CCHP Replacement	1	-4,245	-4,245	15	-63,675
Totals			**1,468**	**243,237**	**166**	**2.22**	**540,015**

4.1.2 Impact by Rate Class

The 2025 NPC Res AC channel provided savings in two rate class, residential single-family homes

("RS"), and multifamily homes ("RM"). The 2025 SPPC Res AC channel provided savings in two rate class, residential single-family homes ("D1"), and multifamily homes ("D1-M"). The rate class, along with installation quantity and annual kWh, are presented in Table 4-5 and Table 4-6 below.

Table 4-5. NPC Ex-Post Energy Impacts by Rate Class

Rate Class	Total Installs	Ex-Post Verified Annual Energy Savings (kWh)
RS	1,054	1,172,265
RM	4,206	4,939,805

Table 4-6. SPPC Ex-Post Energy Impacts by Rate Class

Rate Class	Total Installs	Ex-Post Verified Annual Energy Savings (kWh)
D1	131	-25,793
D1-M	1,337	269,030

Additionally, the Evaluator determined monthly savings results for the first year as well as the subsequent years 2025 through 2028. The monthly savings results by rate code are provided in Appendix A: Savings Per Month by Rate Class.

4.1.3 Peak kW Reduction

Peak kW reduction due to the installed measures in 2025 were found to be 3,879.52 kW in NPC and 503.86 kW in SPPC. These values were developed using hourly energy savings curves consisting of 8,760 hourly data points. The monthly kW reduction results by rate code are provided in Appendix A: Savings Per Month by Rate Class.

4.1.4 Cost Effectiveness Inputs

Table 4-7 and Table 4-8 present the summarized M&V results needed to support NV Energy's cost-effectiveness modeling for the Res AC channel. Per unit savings are calculated at the premise level.

Table 4-7.NPC Recommended Inputs for Cost Effectiveness Modeling

Project Type	Building Type	Measure Name	Total Installs	Capacity Savings (kW/Unit)	Annual Savings (kWh/Unit)	Total Annual Savings (kWh/Year)	EUL
Low Income Program	Single Family	AC Tune-Up	151	1.039	1,135	171,395	5
		HP Tune-Up	14	0.387	1,687	23,619	5
	Multifamily	AC Tune-Up	930	1.039	1,029	957,353	5
		HP Tune-Up	606	0.387	1,328	805,016	5
Retrofit	Single Family	AC Tune-Up	599	1.039	1,297	776,689	5
		HP Tune-Up	35	0.387	1,975	69,135	5
		AC Replacement	184	0.433	446	82,132	18
		HP Replacement	62	0.159	558	34,583	15
		HPWH Replacement	9	0.107	1,635	14,712	10
	Multifamily	AC Tune-Up	1,164	1.039	980	1,140,718	5
		HP Tune-Up	1,506	0.387	1,352	2,036,719	5
Totals			**5,260**	**0.738**	**1,162**	**6,112,070**	**5.2**

Table 4-8. SPPC Recommended Inputs for Cost Effectiveness Modeling

Project Type	Building Type	Measure Name	Total Installs	Capacity Savings (kW/Unit)	Annual Savings (kWh/Unit)	Total Annual Savings (kWh/Year)	EUL
Retrofit	Single Family	AC Tune-Up	101	0.357	227	22,953	5
		CCHP Replacement	16	-0.711	-4875	-77,998	15
		HPWH Replacement	14	0.203	2,089	29,253	10
	Multifamily	AC Tune-Up	1,335	0.357	204	272,479	5
		HP Tune-Up	1	0.120	796	796	5
		CCHP Replacement	1	-0.711	-4,245	-4,245	15
Totals			**1,468**	**0.343**	**166**	**243,237**	**2.22**

4.2 Residential Pool Pump Channel

This section presents results and findings from the data collection and energy savings analysis for the Pool Pump channel.

4.2.1 Findings from Verification of Measure Installations

A total of 2,345 NV Energy customers were issued incentives to recalibrate VSD pool pumps. A review of the data from the program tracking database confirmed that the 2025 pool pump channel had 42 pool pumps recalibrated for peak avoidance, and 2,303 pool pumps recalibrated for winterization.

4.2.2 Findings from Review of Tracking Data

Table 4-9 through Table 4-11 provide summary statistics derived from data recorded by the implementer and uploaded into NV Energy's program tracking database.

Table 4-9 shows the distribution of pumps by the rebate amount. Participants received a $150 rebate to have their existing VSD pool pump recalibrated with the services of pool professionals. The total expenditure on rebates for the 2025 Pool Pump channel was $351,750.

Table 4-9. Numbers of Pumps Rebated by Rebate Amount

Measure Type	Rebate Amount	Pumps Calibrated	Amount
Contractor Calibration (Winterization)	$150	2,303	$345,450
Contractor Calibration (Peak Avoidance)	$150	42	$6,300
Total		**2,345**	**$351,750**

Table 4-10 details the distribution of pump sizes during 2025. 80 percent of calibrated pool pumps had a horsepower of 2.6 or greater. The horsepower was not reported for three pool pumps.

Table 4-10. Pool Pumps Rebated by Pump Sizes

Pump Size (HP)	Pumps Calibrated	Percent of Total
Unknown	3	0.13%
< 1.0	0	0.00%
1.0 – 1.5	33	1.41%
1.6 – 2.0	325	13.86%
2.1 -2.5	99	4.22%
2.6 -3.0	1210	51.60%
3.1 – 3.5	670	28.57%
>3.5	5	0.21%
Total	**2,345**	**100%**

Table 4-11 summarizes the geographical distribution of pool pump retrofits during 2025. The majority of VSD Pump calibrations occurred at premises with Las Vegas addresses.

Table 4-11. Numbers of Pool Pumps Rebated by Geographical Location

Geographical Locations of Calibrated Pool Pumps	Pumps Calibrated	Percent of Total
Henderson	533	22.73%
Las Vegas	1,681	71.68%
North Las Vegas	130	5.54%
Clark County[18]	1	0.04%
Total	**2,345**	**100%**

4.2.3 Findings from Energy and Demand Impact Analyses

The following section reports the findings from the M&V analysis of energy and demand impacts for the measures installed through the 2025 pool pump channel.

4.2.3.1 Ex-Post Energy (kWh) Savings

Table 4-12 shows annualized ex-ante estimated kWh savings and ex-post verified kWh savings and the realization rate for the pool pump channel.

Table 4-12.Summary of Program-Level Energy kWh Savings for New Pumps and for Recalibrated Pumps

Measure	Ex-Ante Energy Savings (kWh)	Ex-Post Energy Savings (kWh)	Variance	Realization Rate
Recalibrated Pumps (Winterization)	5,258,171	4,956,716	-301,455	94%
Recalibrated Pumps (Peak Avoidance)	48,691	119,062	70,371	245%
Totals	**5,306,862**	**5,075,778**	**-231,084**	**96%**

The realization rate for winterization pool pump recalibrations was 94 percent. Measure level realization rates for winterization pool pump recalibrations ranged from negative 308 percent to 502 percent. There were multiple instances of very large differences between the ex-ante and ex-post savings estimates. Additionally, 153 winterization pool pump calibrations resulted in negative ex-post savings, eight resulted in zero ex-post savings, 31 measures did not have pre -calibration parameters in the reported data, and one measure did not have post-calibration parameters.

The same variances were seen for peak avoidance pool pump Calibrations, though the participant size was smaller. The realization of 245 percent was due to one record having a realization rate 2,693 percent. The Evaluator was unable to verify the ex-ante savings for both winterization and peak avoidance calibrations.

[18] Small towns within Clark County or the city was not specified.

Of the 2,303 winterization pool pump calibrations, 982 involved only reducing the high-speed hours of operation or high-speed wattage. The low-speed settings were not used prior to the calibration and were not set during the calibration.

The Evaluator followed the engineering analysis detailed in the M & V Methodology section to estimate kWh savings and was unable to reproduce the exact ex-ante savings. Table 4-13 shows the 2025 first-year and lifetime energy savings based on ex-post verified kWh savings.

Table 4-13. First-Year and Lifetime Energy Savings, based on 2025 Ex-Post Savings

Measure	First-Year Energy Savings (kWh)	Verified Annual Energy Savings (kWh)	EUL	Lifetime Energy Savings (kWh)[19]
Recalibrated Pumps (Winterization)	634,910	4,956,716	1.00	4,956,485
Recalibrated Pumps (Peak Avoidance)	82,783	119,062	2.00	238,540
Total	**717,693**	**5,075,778**	**1.02**	**5,195,025**

4.2.3.2 Ex-Post Peak Demand (kW) Reductions

Critical peak demand savings were calculated by month and by rate class, disaggregating ex-post verified annual energy savings into 8,760 hourly bins using the pool pump 8,760-hour energy savings curve. The summer critical peak demand savings were 1,774.74 kW for the winterization recalibrated pool pumps, and 42.63 kW for the peak avoidance recalibrated pool pumps. The complete table of ex-post verified critical peak demand (kW) savings by month and by rate class are provided in Appendix A: Savings Per Month by Rate Class.

4.2.4 Cost Effectiveness Inputs

Table 4-14 provides summarized M&V results to support NV Energy's cost-effectiveness modeling for the pool pump channel. Per unit savings are calculated at the premise level. Total Capacity represents ex-post peak verified demand reduction per VSD pool pump and Total Annual Savings represents the total full-year energy savings. EUL is the average length of time (in years) that the VSD pool pump is functional and saving energy.

[19] Lifetime Energy Savings are derived from the Qualus GURU analysis.

Table 4-14. Cost Effectiveness Inputs for NPC 2025 Pool Pump Program

Measure	Number of Units	Total Capacity Savings (kW/unit)	Annual Savings per Unit (kWh/unit)	Total Annual Program Savings (kWh)	EUL
Recalibrated Pumps (Winterization)	2,303	0.771	2,152	4,956,716	1.00
Recalibrated Pumps (Peak Avoidance)	42	1.015	2,835	119,062	2.00

4.3 Residential Appliance Channel

This subsection provides detailed M&V results pertaining to the ex-post energy impacts of the NPC and SPPC Appliance channels during 2025.

4.3.1 Energy Impacts and Variances

Table 4-15 presents ex-ante and ex-post energy savings, along with program realization rates, for each of the program measures. Overall, the Appliance channel resulted in estimated ex-ante savings of 4,974,146 kWh for NPC and 4,254,863 kWh for SPPC. After completing M&V activities and analyses, the Evaluator determined ex-post verified savings to be 4,937,046 kWh for NPC and 4,250,836 kWh for SPPC. The Appliance channel realization rate was 99 percent for NPC and 100 percent for SPPC.

Table 4-15. NPC Annual Energy Impact Summary

Channel	Measure Name	Total Installs	Annual Energy Savings (kWh)		Realization Rate
			Ex-Ante	Ex-Post	
Marketplace	Advanced Power Strip	327	53,955	53,511	99%
	ENERGY STAR® Air Purifier	100	14,750	13,877	94%
Marketplace Total		**427**	**68,705**	**67,388**	**98%**
Appliances	Advanced Power Strip	25,391	4,189,515	4,155,067	99%
	ENERGY STAR® Clothes Washer	642	77,146	76,911	100%
	ENERGY STAR® Air Purifier	4,577	638,780	637,679	100%
Appliance Total		**30,610**	**4,905,441**	**4,869,657**	**99%**
Total		**31,037**	**4,974,146**	**4,937,046**	**99%**

Table 4-16. SPPC Annual Energy Impact Summary

Channel	Measure Name	Total Installs	Annual Energy Savings (kWh)		Realization Rate
			Ex-Ante	Ex-Post	
Marketplace	Advanced Power Strip	98	16,170	16,037	99%
	ENERGY STAR® Air Purifier	43	6,343	6,020	95%
Marketplace Total		**141**	**22,513**	**22,057**	**98%**
Appliances	Advanced Power Strip	17,430	2,875,950	2,852,303	99%
	ENERGY STAR® Clothes Washer	652	72,062	74,175	103%
	ENERGY STAR® Air Purifier	4,059	571,539	571,668	100%
	Engine Block Heater Controller	1,320	712,800	730,634	103%
Appliance Total		**23,461**	**4,232,351**	**4,228,779**	**100%**
Total		**23,602**	**4,254,863**	**4,250,836**	**100%**

Realization rates for this channel are discussed by measure in the following sections.

4.3.2 Peak kW Reduction

Peak kW reduction due to the installed appliance measures during 2025 was found to be 654.34 kW for NPC and 465.65 for SPPC. This value was developed using hourly energy savings curves consisting of 8,760 hourly data points. Table 4-17 and Table 4-18 detail peak kW reduction by measure for NPC and SPPC. The monthly kW reduction results by rate class are provided in Appendix A: Savings Per Month by Rate Class.

Table 4-17. NPC Critical Peak Demand Reduction (kW)

Channel	Measure Name	Critical Peak Demand Reduction (kW)
Marketplace	Advanced Power Strip	7.23
	ENERGY STAR® Air Purifier	1.58
Marketplace Total		**8.81**
Appliance	Advanced Power Strip	561.47
	ENERGY STAR® Clothes Washer	11.27
	ENERGY STAR® Air Purifier	72.79
Appliance Total		**645.53**
Total		**654.34**

Table 4-18. SPPC Critical Peak Demand Reduction (kW)

Channel	Measure Name	Critical Peak Demand Reduction (kW)
Marketplace	Advanced Power Strip	2.17
	ENERGY STAR® Air Purifier	0.69
Marketplace Total		**2.86**
Appliance	Advanced Power Strip	386.67
	ENERGY STAR® Clothes Washer	10.86
	ENERGY STAR® Air Purifier	65.26
	Engine Block Heater Controller	0.00
Appliance Total		**462.79**
Total		**465.65**

4.3.3 Advanced Power Strip

A review of program tracking data identified that a total of 25,391 APS's were discounted through retail stores and 327 through the online marketplace in NPC. In SPPC, 17,430 were discounted through retail stores and 98 were discounted through the online marketplace during the 2025 program year. Table 4-19 shows annualized ex-ante estimated kWh savings and ex-post verified kWh savings and the realization rate for APS.

Table 4-19. Advanced Power Strip Impact Summary

Territory	Channel	Total Installs	First-Year (2025) Energy Savings (kWh)	Annual Energy Savings (kWh)		Realization Rate
				Ex-Ante	Ex-Post	
NPC	Retail	25,391	1,508,780	4,189,515	4,155,067	99%
	Marketplace	327	29,128	53,955	53,511	99%
SPPC	Retail	17,430	1,046,554	2,875,950	2,852,303	99%
	Marketplace	98	8,831	16,170	16,037	99%
Total		**43,246**	**2,593,292**	**7,135,590**	**7,076,918**	**99%**

Ex-post savings estimates used the Arkansas TRM deemed savings methodology with an applied ISR of 0.98[20]. In the 2025 program year, the ex-ante deemed savings value was updated to the 2024 ex-post savings of 165 kWh. For APS sold through participating retail stores and the online marketplace in SPPC and NPC, the realization rate difference can be explained by the updated ISR

[20] ISR is derived from the 2024 Low-Income M&V Survey Results

applied to the ex-post savings. The ISR decreased from 0.99 in 2024 to 0.98 in 2025.

4.3.4 ENERGY STAR® Electric Clothes Washers

The Evaluator's review of program tracking data identified that a total of 642 Clothes Washers were sold in NPC and 652 in SPPC during the 2025 program year. The Evaluator performed a census review of the program tracking data and confirmed that every Clothes Washer model was ENERGY STAR® verified.

Table 4-20 shows annualized ex-ante estimated kWh savings and ex-post verified kWh savings and the realization rate for ENERGY STAR® Clothes Washers.

Table 4-20. ENERGY STAR® Clothes Washer Impact Summary

Territory	Total Installs	First-Year (2025) Energy Savings (kWh)	Annual Energy Savings (kWh)		Realization Rate
			Ex-Ante	Ex-Post	
NPC	642	40,323	77,146	76,911	100%
SPPC	652	41,053	72,062	74,175	103%
Total	**1,294**	**81,376**	**149,208**	**151,086**	**101%**

For both NPC and SPPC, the difference between ex-ante and ex-post savings can be explained by ex-ante savings using one deemed kWh savings estimate for each measure. The Evaluator verified the configuration of every Clothes Washer in the 2025 program.

4.3.5 ENERGY STAR® Room Air Purifier

The Evaluator's review of program tracking data identified that a total of 4,577 Air Purifiers were discounted through retail stores and 100 through the online marketplace in NPC. In SPPC, 4,059 were discounted through retail stores while 43 were discounted through the online marketplace during the 2025 program year. The Evaluator performed a census review of the program tracking data and confirmed that every Air Purifier model was ENERGY STAR® certified. Table 4-21 shows annualized ex-ante estimated kWh savings and ex-post verified kWh savings and the realization rate for ENERGY STAR® Air Purifiers.

Table 4-21. ENERGY STAR® Air Purifier Impact Summary

Territory	Channel	Total Installs	First-Year (2025) Energy Savings (kWh)	Annual Energy Savings (kWh)		Realization Rate
				Ex-Ante	Ex-Post	
NPC	Retail	4,577	221,405	638,780	637,679	100%
	Marketplace	100	1,717	14,750	13,877	94%
SPPC	Retail	4,059	207,148	571,539	571,668	100%
	Marketplace	43	917	6,343	6,020	95%
Total		**8,779**	**431,187**	**1,231,412**	**1,229,244**	**100%**

For both NPC and SPPC air purifiers sold through retail stores, the small differences between ex-ante and ex-post savings can be explained by ex-ante savings estimates using different CADR parameters than the ex-post verified CADR. Seventy-nine measures sold through retail stores in NPC and 40 measures in SPPC had deemed savings for the incorrect CADR group. For the measures sold through the online marketplace, ex-ante deemed savings did not match the deemed savings used for ex-post savings. The Evaluator followed the Regional Technical Forum Air Purifier V2.1. The Evaluator verified every Air Purifier model and used the actual CADR for each ENERGY STAR® Air Purifier.

4.3.6 Engine Block Heater Controller

The Evaluator's review of program tracking data identified that a total of 1,320 EBHC's were distributed through the channel during the 2025 program year. EBHC's were only available in the SPPC territory. Table 4-22 shows annualized ex-ante estimated kWh savings and ex-post verified kWh savings and the realization rate for EBHC.

Table 4-22. Engine Block Heater Controller Impact Summary

Territory	Total Installs	First-Year (2025) Energy Savings (kWh)	Annual Energy Savings (kWh)		Realization Rate
			Ex-Ante	Ex-Post	
SPPC	1,320	286,460	712,800	730,634	103%
Total	**1,320**	**286,460**	**712,800**	**730,634**	**103%**

Ex-post savings calculations included factoring in northern Nevada weather, utilizing the distribution survey results, post participation survey, and using a model specific energy savings curve. Updates to the analysis in 2025 included applying an ISR and mode factor from the post participation survey. The post participation survey showed that 35 percent of participants used the maintain ready mode and 65 percent used the timed ready mode. Also, an ISR of 79 percent was applied to the ex-post savings. Both the percentage of participants using the maintain ready mode

and the ISR increased from 2024, resulting in the realization rate of 103 percent. Further information about ex-post kWh estimates can be found in the Engine Block Heater Controllers methodology section of this report.

4.3.7 Appliance Program Lifetime Savings

Table 4-23 and Table 4-24 detail the NPC and SPPC lifetime energy savings for the appliance program in 2025.

Table 4-23. NPC Ex-Post Lifetime Energy Savings (kWh)

Channel	Measure Name	Ex-Post Energy Savings (kWh)	Effective Useful Life (EUL), Years	Ex-Post Lifetime Energy Savings (kWh)
Marketplace	Advanced Power Strip	53,511	10.0	535,114
	ENERGY STAR® Air Purifier	13,877	9.0	124,893
Marketplace Total		**67,388**	**9.8**	**660,007**
Appliances	Advanced Power Strip	4,155,067	10.0	41,550,670
	ENERGY STAR® Clothes Washer	76,911	14.0	1,076,757
	ENERGY STAR® Air Purifier	637,679	9.0	5,739,111
Appliance Total		**4,869,657**	**9.9**	**48,366,539**
Totals		**4,937,046**	**9.9**	**49,026,545**

Table 4-24. SPPC Ex-Post Lifetime Energy Savings (kWh)

Channel	Measure Name	Ex-Post Energy Savings (kWh)	Effective Useful Life (EUL), Years	Ex-Post Lifetime Energy Savings (kWh)
Marketplace	Advanced Power Strip	16,037	10.0	160,370
	ENERGY STAR® Air Purifier	6,020	9.0	54,180
Marketplace Total		**22,057**	**9.7**	**214,550**
Appliances	Advanced Power Strip	2,852,303	10.0	28,523,027
	ENERGY STAR® Clothes Washer	74,175	14.0	1,038,448
	ENERGY STAR® Air Purifier	571,668	9.0	5,145,012
	Engine Block Heater Controller	730,634	10.0	7,306,335
Appliance Total		**4,228,779**	**9.9**	**42,012,823**
Totals		**4,250,836**	**9.9**	**42,227,373**

4.3.8 Cost Effectiveness Inputs

Table 4-25 and Table 4-26 provide summarized M&V results to support NV Energy's cost-effectiveness modeling for the Appliance channel. Per unit savings are calculated at the premise level. Total Capacity represents ex-post peak verified demand reduction per appliance measure and Total Annual Savings represents the total full-year energy savings. EUL is the average length of time (in years) that the appliance measure is functional and is saving energy.

Table 4-25. Cost Effectiveness Inputs for NPC 2025 Appliance Measures

Measure	Number of Units	Total Capacity Savings (kW/unit)	Annual Savings per Unit (kWh/unit)	Total Annual Program Savings (kWh)	EUL (Years)
Advanced Power Strip	25,391	0.022	164	4,155,067	10.0
Advanced Power Strip (Marketplace)	327	0.022	164	53,511	10.0
ENERGY STAR® Clothes Washer	642	0.018	120	76,911	14.0
ENERGY STAR® Air Purifier	4,577	0.016	139	637,679	9.0
ENERGY STAR® Air Purifier (Marketplace)	100	0.016	139	13,877	9.0

Table 4-26. Cost Effectiveness Inputs for SPPC 2025 Appliance Measures

Measure	Number of Units	Total Capacity Savings (kW/unit)	Annual Savings per Unit (kWh/unit)	Total Annual Program Savings (kWh)	EUL (Years)
Advanced Power Strip	17,430	0.022	164	2,852,303	10.0
Advanced Power Strip (Marketplace)	98	0.022	164	16,037	10.0
ENERGY STAR® Clothes Washer	652	0.017	114	74,175	14.0
ENERGY STAR® Air Purifier	4,059	0.016	141	571,668	9.0
ENERGY STAR® Air Purifier (Marketplace)	43	0.016	140	6,020	9.0
Engine Block Heater Controller	1,320	0.000	554	730,634	10.0

4.4 Evaluation Recommendations

4.4.1 Residential High-Efficiency Air Conditioning Channel

The 2025 Res AC channel successfully saved energy by providing incentives for installing replacement AC's and HP's and performing tune-ups on existing HVAC measures.

4.4.1.1 Progress on 2024 Evaluation Recommendations

Part of the evaluation process for NV Energy's ongoing programs includes a review of progress taken on evaluation recommendations from the previous year. Although the Res AC Program is no longer a standalone program, it is still important to review progress made on the previous year's recommendations.

Table 4-27. Progress Review of Previous Year Evaluation Recommendations

Recommendation Title	Description	PY2025 Status
Deemed Tune-Up Ex-Ante Savings Estimates.	The Evaluator recommends that ex-ante estimated savings could be further improved if site specific tune-up parameters are used to estimate kWh savings.	Ex-ante estimates have improved, different savings values for each category (single family, multifamily)
Expand the SPPC low-income program to include AC and heat pump replacements to better serve the low-income households.	NV Energy did an excellent job in SPPC with the lower income tune-ups in 2024 but could do more in these households through replacing old, inefficient HVAC units instead of just tuning them up. It is becoming more common in low/moderate income energy efficiency programs to offer low-to-no-cost loans to income qualified customers to help with the purchase of high impact measures such as efficient HVAC units.	Not implemented, The SPPC Res AC program did not include a low-income category in 2025

4.4.1.2 2025 Evaluation Recommendations

The Evaluator has identified potential areas for improving the Program and has the following recommendations:

- In 2025, the SPPC Res AC program was mainly AC tune-ups (98 percent of total measure count). The Evaluator recommends investing resources to re-establish HP and AC installations in SPPC.
- In 2025, HP and AC tune-ups made up a significant portion of the NPC and SPPC Res AC program. The HP tune-ups in both sectors have had realization rates higher than 100 percent in 2024 and 2025 while multifamily AC tune-ups in SPPC have had a realization rate lower than 100% in recent year. To improve realization rates, the Evaluator recommends ex-ante savings use the pre/post tune-up parameters to estimate kWh savings.

4.4.2 Residential Pool Pump Channel

The 2025 Pool Pump channel successfully saved energy by providing incentives for recalibrating existing VSD pool pumps.

4.4.2.1 Progress on 2024 Evaluation Recommendations

Part of the evaluation process for NV Energy's ongoing programs includes a review of progress taken on evaluation recommendations from the previous year.

Table 4-28. Progress Review of Previous Year Evaluation Recommendations

Recommendation Title	Description	PY2025 Status
Improve Realization rates	Although ex-ante savings are estimated using site specific parameters for each measure, a large range of realization rates at the record level was seen. The Evaluator recommends that NV Energy and the implementation contractor review the ex-ante savings calculation with evaluators to improve realization rates	Not Implemented, in 2025 there was high realization rate variability
Data tracking for recalibrations	The implementation contractor and NV Energy should track the previous calibration dates of the recalibrated pumps so that the implementation contractor and the Evaluator can verify that pool pumps are not being recalibrated during their effective useful life ("EUL").	Implemented
Verify standard efficiency calibrations	In 2025 there was a high percentage of winterization calibrations where the only change that occurred was the reduction of the operating hours. The Evaluator recommends that NV Energy and the implementation contractor verify that the pump being calibrated is a VSD pool pump, and that a standard calibration optimizing the VSD pump schedule for efficiency and pool cleanliness is being performed during a winterization or peak avoidance calibration.	Not implemented in 2025. Same issue persists.

4.4.2.2 2025 Evaluation Recommendations

The Evaluator has identified potential areas for improving the Pool Pump channel and has the following recommendations:

- The implementation contractor and NV Energy should track the previous calibration dates of the recalibrated pumps so that the implementation contractor and the Evaluator can verify the recalibration is not taking place within the previous EUL.
- In 2025 there was a high percentage of winterization calibrations where the only change that occurred was the reduction of the operating hours. The Evaluator recommends that NV Energy and the implementation contractor verify that the pump being calibrated is a VSD pool pump, and that the VSD pump is being optimized during a winterization or peak avoidance calibration.
- Although ex-ante savings are estimated using site specific parameters for each measure, a large range of realization rates at the record level was seen. The Evaluator recommends that NV Energy and the implementation contractor review the ex-ante savings calculation with evaluators to improve realization rates.
- The Evaluator Identified multiple data entry errors which affected ex-post savings calculations. The Evaluator recommends increasing training for program contractors to reduce data errors and improve program realization rates.

4.4.3 Residential Appliance Channel

The 2025 Appliance channel successfully saved energy by providing incentives for purchasing energy saving appliances.

4.4.3.1 Progress on 2024 Evaluation Recommendations

Although the Appliance Program is no longer a standalone program, it is still important to review progress made on the previous year's recommendations.

Table 4-29. Progress Review of Previous Year Evaluation Recommendations

Recommendation Title	Description	PY2025 Status
Increase efficient appliance measures	In Both NPC and SPPC, APS made up a majority of the measures discounted in 2024 while the number of other appliances decreased. To ensure that the program channel is not dependent on the success of one measure, the Evaluator recommends that NV Energy and the implementation contractor work with retailers and distributors to increase the sale of energy efficient appliances other than APS.	Not implemented
Deemed ex-ante savings	The Evaluator recommends that the implementer estimates ex-ante savings using measure-specific parameters. For multiple measures in 2024, variance between ex-ante and ex-post savings were due to estimated ex-ante savings using a deemed value.	Not implemented
APS ex-ante savings	Ex-ante Savings estimates for APS should reflect the previous evaluation ex-post savings estimates. Since the APS ex-post savings include an applied ISR, the Evaluator recommends that the ex-ante savings estimates reflect the previous year's ex-post saving	Implemented
EBHC ex-ante savings	The Evaluator recommends updating the engine block heater controller ex-ante savings estimate. Since engine block heater controllers were a new measure in the 2023 program, the Evaluator administered a survey to better understand participant usage. Since this informed the ex-post savings with an applied ISR and mode of use, the Evaluator recommends that the implementer review ex-ante savings for engine block heater controllers to improve realization rates.	Implemented. EBHC ex-ante savings was updated to 2024 ex-post savings.

4.4.3.2 2025 Evaluation Recommendations

The Evaluator has identified potential areas for improving the Appliance program and has the following recommendations:

- In Both NPC and SPPC, APS made up a majority of the measures discounted in 2025 while the number of other appliances decreased. To ensure that the program channel is not dependent on the success of one measure, the Evaluator recommends that NV Energy and the implementation contractor work with retailers and distributors to increase the sale of energy efficient appliances other than APS.
- The Evaluator recommends that the implementer estimates ex-ante savings using measure-specific parameters. For multiple measures in 2025, variance between ex-ante and ex-post savings were due to estimated ex-ante savings using a deemed value.
- If there are any measures added to the online marketplace, the Evaluator recommends that NV Energy consult with the Evaluator about ex-ante savings estimates before they are added to the marketplace.

5 APPENDIX A: SAVINGS PER MONTH BY RATE CLASS

5.1 NPC Residential High-Efficiency Air Conditioning Channel

Table 5-1. Monthly kWh Savings by Rate Class – 2025 (First Year/Leap Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	0	0	0	657	11,515	76,010	135,469	150,732	129,472	16,986	16,037	21,324	**558,202**
RM	0	0	0	845	31,694	202,678	474,232	539,540	338,543	143,359	268,782	444,236	**2,443,909**
Total	**0**	**0**	**0**	**1,502**	**43,209**	**278,688**	**609,701**	**690,272**	**468,015**	**160,345**	**284,819**	**465,560**	**3,002,111**

Table 5-2. Monthly kWh Savings by Rate Class – 2026 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	19,492	14,915	13,027	21,315	78,140	255,489	321,367	255,691	141,233	15,333	15,506	20,757	**1,172,265**
RM	401,629	303,745	259,670	135,957	271,047	686,994	899,885	724,381	414,239	143,500	267,094	431,663	**4,939,805**
Total	**421,121**	**318,660**	**272,698**	**157,272**	**349,187**	**942,483**	**1,221,252**	**980,072**	**555,472**	**158,833**	**282,600**	**452,420**	**6,112,070**

Table 5-3. Monthly kWh Savings by Rate Class – 2027 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	19,505	15,040	12,935	22,037	81,731	251,853	310,604	264,388	143,355	15,258	14,943	20,616	**1,172,265**
RM	401,831	306,605	254,515	139,888	276,388	677,491	875,345	746,111	418,050	148,534	266,467	428,580	**4,939,805**
Total	**421,336**	**321,645**	**267,450**	**161,925**	**358,119**	**929,344**	**1,185,949**	**1,010,499**	**561,405**	**163,792**	**281,410**	**449,196**	**6,112,070**

Table 5-4. Monthly kWh Savings by Rate Class – 2028 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	19,619	15,052	12,855	27,143	70,967	259,242	309,616	268,910	137,451	16,441	14,339	20,630	**1,172,265**
RM	404,556	307,006	252,974	155,981	245,677	693,214	872,120	758,793	405,651	151,126	264,113	428,594	**4,939,805**
Total	**424,175**	**322,058**	**265,829**	**183,124**	**316,644**	**952,456**	**1,181,736**	**1,027,703**	**543,102**	**167,567**	**278,452**	**449,224**	**6,112,070**

Table 5-5. Critical Peak Demand (kW) Reduction per Month per Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RS	40.90	31.88	29.87	8.63	458.10	900.82	1,036.13	884.32	773.22	204.14	23.29	42.00
RM	835.84	651.22	590.46	140.99	1,330.33	2,487.83	2,843.39	2,323.01	2,221.68	542.84	459.59	875.56
Total	**876.74**	**683.10**	**620.33**	**149.62**	**1,788.43**	**3,388.65**	**3,879.52**	**3,207.33**	**2,994.90**	**746.98**	**482.88**	**917.56**

5.2 SPPC Residential High-Efficiency Air Conditioning Channel

Table 5-6. Monthly kWh Savings by Rate Class – 2025 (First Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	0	0	0	43	236	2,268	7,248	5,204	2,900	-1,428	-6,398	-10,254	**-181**
D1-M	0	0	0	0	0	6,069	73,008	66,659	39,319	2,528	-286	-579	**186,718**
Total	**0**	**0**	**0**	**43**	**236**	**8,337**	**80,256**	**71,863**	**42,219**	**1,100**	**-6,684**	**-10,833**	**186,537**

Table 5-7. Monthly kWh Savings by Rate Class – 2026 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	-9,005	-7,785	-6,786	-3,610	-957	3,927	7,962	6,093	3,218	-2,148	-6,580	-10,122	**-25,793**
D1-M	-530	-459	-422	145	4,889	45,752	104,259	75,580	38,468	2,333	-413	-572	**269,030**
Total	**-9,535**	**-8,244**	**-7,208**	**-3,465**	**3,932**	**49,679**	**112,221**	**81,673**	**41,686**	**185**	**-6,993**	**-10,694**	**243,237**

Table 5-8. Monthly kWh Savings by Rate Class – 2027 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	-8,954	-7,860	-6,570	-3,730	-798	3,910	7,807	6,094	3,255	-2,274	-6,627	-10,046	**-25,793**
D1-M	-528	-462	-413	134	5,513	46,087	102,695	75,161	39,638	2,187	-414	-568	**269,030**
Total	**-9,482**	**-8,322**	**-6,983**	**-3,596**	**4,715**	**49,997**	**110,502**	**81,255**	**42,893**	**-87**	**-7,041**	**-10,614**	**243,237**

Table 5-9. Monthly kWh Savings by Rate Class – 2028 (Full Year/Leap Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	-8,932	-7,818	-6,489	-3,557	-1,165	3,759	7,949	6,277	2,964	-2,178	-6,492	-10,111	**-25,793**
D1-M	-526	-460	-409	369	4,170	45,225	104,454	77,535	37,112	2,541	-409	-572	**269,030**
Total	**-9,458**	**-8,278**	**-6,898**	**-3,188**	**3,005**	**48,984**	**112,403**	**83,812**	**40,076**	**363**	**-6,901**	**-10,683**	**243,237**

Table 5-10. Critical Peak Demand (kW) Reduction per Month per Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
D1	-4.35	-3.40	-0.49	-1.79	4.69	19.12	31.25	24.85	24.98	4.46	-2.26	-5.63
D1-M	-0.50	-0.46	-0.31	-0.28	0.00	274.63	472.62	380.84	377.94	-0.04	-0.28	-0.54
Total	**-4.85**	**-3.86**	**-0.80**	**-2.07**	**4.69**	**293.75**	**503.86**	**405.69**	**402.92**	**4.42**	**-2.54**	**-6.17**

5.3 Residential Pool Pump Channel

5.3.1 NPC Pool Pump Calibrations

Table 5-11. Monthly kWh Savings by Rate Class – 2025 (First Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	0	0	0	1,755	6,504	9,510	14,587	16,327	23,958	88,914	227,922	328,216	**717,693**

Table 5-12. Monthly kWh Savings by Rate Class – 2026 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	305,724	260,282	260,819	299,586	466,067	562,588	731,456	746,731	497,359	276,442	25,864	7,720	**4,440,638**

Table 5-13. Monthly kWh Savings by Rate Class – 2027 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	7,192	6,062	6,135	5,443	4,458	3,691	2,569	1,247	-102	0	0	0	**36,695**

Table 5-14. Critical Peak Demand (kW) Reduction per Month per Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RS	456.09	515.07	390.42	951.66	1,506.15	1,596.91	1,781.30	1,817.37	1,565.65	1,016.48	145.04	12.52

5.4 Residential Appliance Channel

5.4.1 NPC Residential Appliance

peakTable 5-15. Monthly kWh Savings by Rate Class – 2025 (First Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	0	0	67	4,485	73,827	107,105	155,989	178,330	242,704	258,818	292,052	457,131	**1,770,508**

Table 5-16. Monthly kWh Savings by Rate Class – 2026 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	456,301	409,052	399,373	383,688	456,300	391,812	412,516	405,026	393,166	358,732	347,391	456,300	**4,869,657**

Table 5-17. Monthly kWh Savings by Rate Class – 2027 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	455,744	409,143	394,653	384,990	455,744	392,695	410,807	406,610	392,697	362,934	347,896	455,744	**4,869,657**

Table 5-18. Monthly kWh Savings by Rate Class – 2028 (Full Year/Leap Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	455,966	409,854	394,840	385,172	455,966	393,782	409,182	406,613	392,019	362,239	348,058	455,966	**4,869,657**

Table 5-19. Critical Peak Demand (kW) Reduction per Month per Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RS	1,117.67	1,123.81	1,082.21	1,071.72	849.74	645.78	645.53	613.19	606.07	862.13	759.81	977.44

5.4.2 SPPC Residential Appliance

Table 5-20. Monthly kWh Savings by Rate Class – 2025 (First Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	0	0	39	3,527	50,178	76,323	114,535	142,123	175,433	185,452	355,613	477,992	**1,581,215**

Table 5-21. Monthly kWh Savings by Rate Class – 2026 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	476,421	428,195	437,343	280,991	326,424	281,729	296,368	291,226	282,659	259,446	391,556	476,421	**4,228,779**

Table 5-22. Monthly kWh Savings by Rate Class – 2027 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	475,053	427,366	433,115	281,853	326,042	282,335	295,194	292,313	282,337	262,331	395,787	475,053	**4,228,779**

Table 5-23. Monthly kWh Savings by Rate Class – 2028 (Full Year/Leap Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	476,192	428,745	434,231	277,171	326,194	283,082	294,078	292,315	281,872	261,854	396,853	476,192	**4,228,779**

Table 5-24. Critical Peak Demand (kW) Reduction per Month per Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
D1	1,012.00	1,112.43	1,134.57	1,204.70	838.13	461.72	461.55	462.79	457.62	762.73	862.60	1,012.00

5.5 Online Marketplace Channel

5.5.1 NPC Online Marketplace

Table 5-25. Monthly kWh Savings by Rate Class – 2025 (First Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	9	58	89	149	1,503	3,738	3,987	4,012	4,022	3,587	3,557	6,134	**30,845**

Table 5-26. Monthly kWh Savings by Rate Class – 2026 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	6,273	5,627	5,540	5,326	6,273	5,430	5,710	5,613	5,448	5,017	4,858	6,273	**67,388**

Table 5-27. Monthly kWh Savings by Rate Class – 2027 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	6,265	5,628	5,480	5,341	6,266	5,442	5,688	5,634	5,442	5,071	4,865	6,266	**67,388**

Table 5-28. Monthly kWh Savings by Rate Class – 2028 (Full Year/Leap Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	6,268	5,637	5,482	5,344	6,269	5,456	5,667	5,634	5,433	5,062	4,867	6,269	**67,388**

Table 5-29. Critical Peak Demand (kW) Reduction per Month per Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RS	14.90	14.98	14.44	14.30	11.44	8.82	8.82	8.40	8.31	11.60	10.29	13.09

5.5.2 SPPC Online Marketplace

Table 5-30. Monthly kWh Savings by Rate Class – 2025 (First Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	0	0	0	10	332	1,139	1,287	1,296	1,302	1,165	1,187	2,029	**9,747**

Table 5-31. Monthly kWh Savings by Rate Class – 2026 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	2,039	1,829	1,818	1,749	2,038	1,780	1,869	1,840	1,786	1,662	1,609	2,038	**22,057**

Table 5-32. Monthly kWh Savings by Rate Class – 2027 (Full Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	2,036	1,829	1,800	1,754	2,036	1,784	1,863	1,846	1,784	1,678	1,611	2,036	**22,057**

Table 5-33. Monthly kWh Savings by Rate Class – 2028 (Full Year/Leap Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1	2,038	1,832	1,801	1,755	2,037	1,788	1,856	1,846	1,781	1,675	1,611	2,037	**22,057**

Table 5-34. Critical Peak Demand (kW) Reduction per Month per Rate Class

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
D1	4.14	4.70	4.83	5.22	4.97	2.86	2.85	2.86	2.83	4.55	3.30	4.14

6 APPENDIX B: COLD CLIMATE HEAT PUMP ANALYSIS

This section describes the M&V activities performed by the Evaluator to determine kWh savings attributed to CCHPs installed in SPPC in the 2025 program year. This test was at the direction of the commission who instructed NV energy to incentivize up to 100 CCHPs as a pilot measure. Since this was a new measure in 2025, the Evaluator worked with the implementation contractor to establish savings methodologies and conducted site visits at participants homes. Steps involved in this M&V work were as follows:

- Verified the quantity of CCHPs installed through the SPPC Res AC program channel.
- Identified the appropriate data and eligibility requirements to calculate CCHP energy savings.
- Conducted site visits to verify CCHP installation, baseline conditions, and usage habits.
- Calculated ex-post annual energy savings, first-year energy savings, and critical peak demand reduction attributable to CCHPs.

6.1 Cold Climate Heat Pump Measure Overview

CCHP's are advanced air source heat pumps designed to maintain heating efficiency at low outdoor temperatures. Compared to traditional HPs, CCHPs incorporate enhanced compressor technology, controls, and refrigerant management systems that allow them to perform in colder climates. Traditional HPs' capacity and efficiency decline substantially as outdoor temperatures drop, resulting in a need to rely on supplemental heating. CCHPs address these limitations by utilizing variable speed compressors, vapor management technology, larger outdoor coil surface areas, advanced defrost control algorithms, and improved low temperature refrigerant controls. Where a traditional HP's efficiency may decline at approximately 35 degrees Fahrenheit, a CCHP can maintain efficiency at five degrees Fahrenheit. ENERGY STAR® defines CCHPs meeting the following parameters[21]:

- Having a SEER2 ≥15.2 and an HSPF2 ≥8.1.
- Maintaining a Coefficient of Performance of at least 1.75 at five degrees Fahrenheit.
- Maintaining at least 70% of heating capacity at 5 degrees Fahrenheit.

6.2 Data Collection

The implementation contractor provided the Evaluator with program tracking data detailed in Section 3.1.3. Since CCHPs were a new measure in 2025, the Evaluator conducted site visits to verify the installation of CCHP and collect the following data:

[21] U.S. Environmental Protection Agency. ENERGY STAR Program Requirements for Central Air-Conditioners and Heat Pumps – Product Specification Version 6.2 (Rev. March 2025). ENERGY STAR. March 2025

- Baseline heating and cooling equipment type
- Baseline Heating fuel type (gas or electric)
- Verify indoor and outdoor model numbers
- Verify heat pump type (ducted or ductless)
- If gas heating, verify the balance point.
- Understand participant habits and thermostat control settings.

The overall goal of the site visits were to engage with participants to gain a better understanding of how the CCHPs were being implemented in real world scenarios.

In the 2025 program year, 17 CCHPs were installed in the SPPC territory. Of the 17 installations, the Evaluator conducted 13 site visits. The implementation contractor reached out to the participants and offered them a $100 gift card if they agreed to participate in the site visits. The site visits were designed to not take more than 15 minutes of the participants' time and allowed flexibility based on the participants' schedule.

6.3 Baseline Configuration

The Evaluator worked with the implementation contractor to develop and implement a methodology to calculate kWh savings for CCHPs which is explained in detail in Section 1. Originally, the eligibility criteria required the baseline HVAC systems to be a CAC with baseboard heating for a ductless CCHP installation or a CAC with electric forced air furnace for a ducted CCHP installation. With the heating type being dominated by Gas in northern Nevada, it proved to be difficult to find participants meeting those requirements[22]. This resulted in the acceptance of participants with gas furnaces as a baseline condition, with an acknowledgement that there could be increased energy usage by converting some of the heating load from natural gas to electric.

6.4 M&V Results

This section details the results of the M&V analysis and the information obtained from the site visits.

6.4.1 Site Visit Results

The Evaluator site visits gathered information used in the kWh savings calculations and led to a better understanding of participant knowledge and habits.

Thirteen sites were visited of the 17 CCHPs installed. The Evaluator verified that the CCHPs were installed and documented the indoor and outdoor model numbers to confirm the AHRI reference

[22] 69% of SSPC residents have Gas Heating, while 21% have electric heating. Public Utilities Commission reference number: 597d2274-c7fd-4ad7-94b1-d830881ccde0

numbers listed in the reported tracking data. Through talking with the participants, The Evaluator identified the HVAC baseline conditions including heating and cooling type shown below in Table 6-1

Table 6-1. Cold Climate Heat Pump Baseline Conditions

Baseline Condition	Quantity
Gas Furnace and CAC	10
Propane Furnace and CAC	1
Gas Furnace and no CAC	2

The most common baseline condition was a gas furnace with a CAC. Additionally, 12 of the 13 participants said that they had a new gas/propane furnace installed at the same time the CCHP was installed. The site visits also confirmed the ducting type. It was found that all 13 sites had ducted HVAC systems. The baseline conditions found during site visits were applied to the kWh savings calculations for CCHPs. For measures that did not receive a site visit, it was assumed that the baseline condition was a gas furnace with a CAC. The ducting type was assumed to be ducted.

The Evaluator discussed how the CCHPs are controlled with participants to better understand how the HVAC system utilizes the CCHP with the backup gas/propane furnaces. Twelve of the 13 participants indicated that their HVAC system was automatically controlled by their thermostat while one participant did not know. Participants were also asked whether their gas bill or propane usage has decreased since installing the CCHP. Eight of the 13 participants indicated that they noticed their gas bill or propane usage decreased. The remainder of participants did not know whether their gas bill or propane usage decreased.

Since all the CCHPs installed in 2025 had a gas furnace or propane furnace baseline and used gas/propane as a supplemental backup, the Evaluator calculated a conservative estimate to determine what percentage of the time the CCHP is used for heating versus the gas/propane furnace. Thermostat control settings allow the participant to set a temperature balance point at which the heating switches from using the CCHP as the heating source to using the gas/propane furnace. During site visits, four of the participants said the balance point was set to 35 degrees Fahrenheit while one participant said the balance point was 20 degrees Fahrenheit. The remainder of participants did not know the balance point. The Evaluator assumed that the balance point was 35 degrees Fahrenheit for the purpose of calculating kWh savings.

Hourly National Oceanic and Atmospheric Administration ("NOAA") weather data was obtained from 2009 to 2023 in Reno, NV[23] . Heating equipment is often utilized at temperatures below 65 degrees Fahrenheit. The Evaluator quantified the number of hours below 65 degrees Fahrenheit but greater than or equal to 35 degrees Fahrenheit and the number of hours below 35 degrees Fahrenheit to calculate an estimated CCHP usage percentage. It was found that 79 percent of

[23] TMYx data is based on 2009 to 2023 hourly weather data.

heating hours were greater than or equal to 35 degrees Fahrenheit and below 65 degrees Fahrenheit while 21 percent of heating hours were below 35 degrees Fahrenheit. Equation 7 in Section 3.1.7 utilized 79 percent as the $F_{load,heating}$ parameter to account for the CCHP heating load.

6.4.2 Energy Impacts

The kWh savings for CCHPs depend on factors such as thermostat control settings, participant behavior and knowledge of the system, installation configurations, baseline conditions, and the northern Nevada climate. It can be helpful in understanding the increased energy usage for the CCHP by looking at the savings calculations by site as shown in Table 6-2.

Table 6-2. Site Level Energy Impacts

Building Type	Baseline		SEER2	HSPF2	EER Seasonal (BTU/watt-hour)	COP Seasonal	Ex-Ante (kWh)	Ex-Post			RR%
	Cooling	Heating						Cooling (kWh)	Heating (kWh)	Total (kWh)	
Single Family	Unknown[24]	Unknown	16.7	8.5	15.5	2.1	3,518	98	-5,738	-5,640	-160%
	Unknown	Unknown	17.2	9.0	16.2	2.2	3,518	124	-4,536	-4,412	-125%
	Unknown	Unknown	17.1	8.5	16.1	2.1	3,518	117	-5,001	-4,884	-139%
	Unknown	Unknown	16.5	8.5	15.3	2.1	3,518	51	-3,579	-3,528	-100%
	CAC	Gas Furnace	16.5	8.5	15.3	2.1	3,518	81	-5,632	-5,552	-158%
	CAC	Gas Furnace	17.2	9.0	16.2	2.2	3,518	124	-4,536	-4,412	-125%
	CAC	Gas Furnace	17.5	9.0	16.7	2.2	3,518	118	-3,548	-3,430	-97%
	CAC	Gas Furnace	16.0	8.5	14.6	2.1	3,518	24	-5,790	-5,766	-164%
	CAC	Gas Furnace	16.4	8.5	15.1	2.1	3,518	63	-5,738	-5,674	-161%
	CAC	Gas Furnace	17.0	8.5	15.9	2.1	3,518	82	-3,790	-3,708	-105%
	CAC	Gas Furnace	17.1	9.0	16.1	2.2	3,518	118	-4,788	-4,669	-133%
	CAC	Gas Furnace	16.7	9.0	15.5	2.2	3,518	80	-4,838	-4,758	-135%
	CAC	Propane Furnace	16.4	8.5	15.1	2.1	3,518	63	-5,738	-5,674	-161%
	CAC	Gas Furnace	17.0	9.0	16.0	2.2	3,518	110	-4,838	-4,728	-134%
	CAC	Gas Furnace	16.5	8.5	15.3	2.1	3,518	81	-5,632	-5,552	-158%
	NONE	Gas Furnace	17.8	9.0	17.1	2.2	3,518	-874	-4,737	-5,611	-160%
Multi-family	NONE	Gas Furnace	18.9	9.0	18.5	2.2	3,518	-637	-3,608	-4,245	-121%
Total							**59,801**	**-178**	**-82,065**	**-82,243**	**-138%**

Table 6-3 shows the kWh energy savings attributed to CCHP installations in the 2025 program

[24] The most common baseline condition, Gas Furnace with CAC, was applied to sites with unknown baseline conditions

year.

Table 6-3. SPPC Cold Climate Heat Pump Annual Energy Impact Summary

Project Type	Building Type	Total Installs	Annual Energy Savings (kWh)		Realization Rate
			Ex-Ante	Ex-Post	
Retrofit	Single Family	16	56,283	-77,998	-139%
	Multifamily	1	3,518	-4,245	-121%
Total		**17**	**59,801**	**-82,243**	**-138%**

The negative realization rate for CCHPs is due to the ex-ante savings using an agreed upon deemed savings estimate for a ductless CCHP with the baseline HVAC conditions being baseboard electric heating with a CAC. The ex-post savings reflect the information collected from the site visits explained in the following section. The 13 site visits informed the baseline HVAC condition. The most common baseline condition found was a gas furnace with a CAC. The most common baseline was applied to the four sites that were not visited. The negative ex-post savings are a result of the baseline heating type being gas furnaces. Replacing a gas furnace with an electric CCHP increases electricity consumption. The breakdown of heating and cooling ex-post kWh savings are shown in Table 6-4 below.

Table 6-4. SPPC Cold Climate Heat Pump Ex-Post kWh Savings

Project Type	Building Type	Total Installs	Annual Cooling Savings (kWh)	Annual Heating Savings (kWh)
Retrofit	Single Family	16	459	-78,457
	Multifamily	1	-637	-3,608
Total		**17**	**-178**	**-82,065**

The negative annual cooling kWh savings for the multifamily measure is due to the participant indicating that no AC was present before installation during the site visit. Cooling savings for a CCHP in the SPPC territory resulted in an average of 89 kWh savings for measures with a CAC baseline[25].

[25] One single family measure and one multifamily measure was found to not have a CAC baseline, resulting in negative cooling savings.

7 APPENDIX C: NEVADA INTERNATIONAL ENERGY CONSERVATION CODE CLIMATE ZONES

Most states in the United States have TRMs that provide standards for calculating energy savings. Many of these TRMs (e.g., the Arkansas and New Mexico TRMs) use IECC climate zones to estimate climate-sensitive measurements.

Figure 7-1 depicts IECC Climate Zones in Nevada, USA.

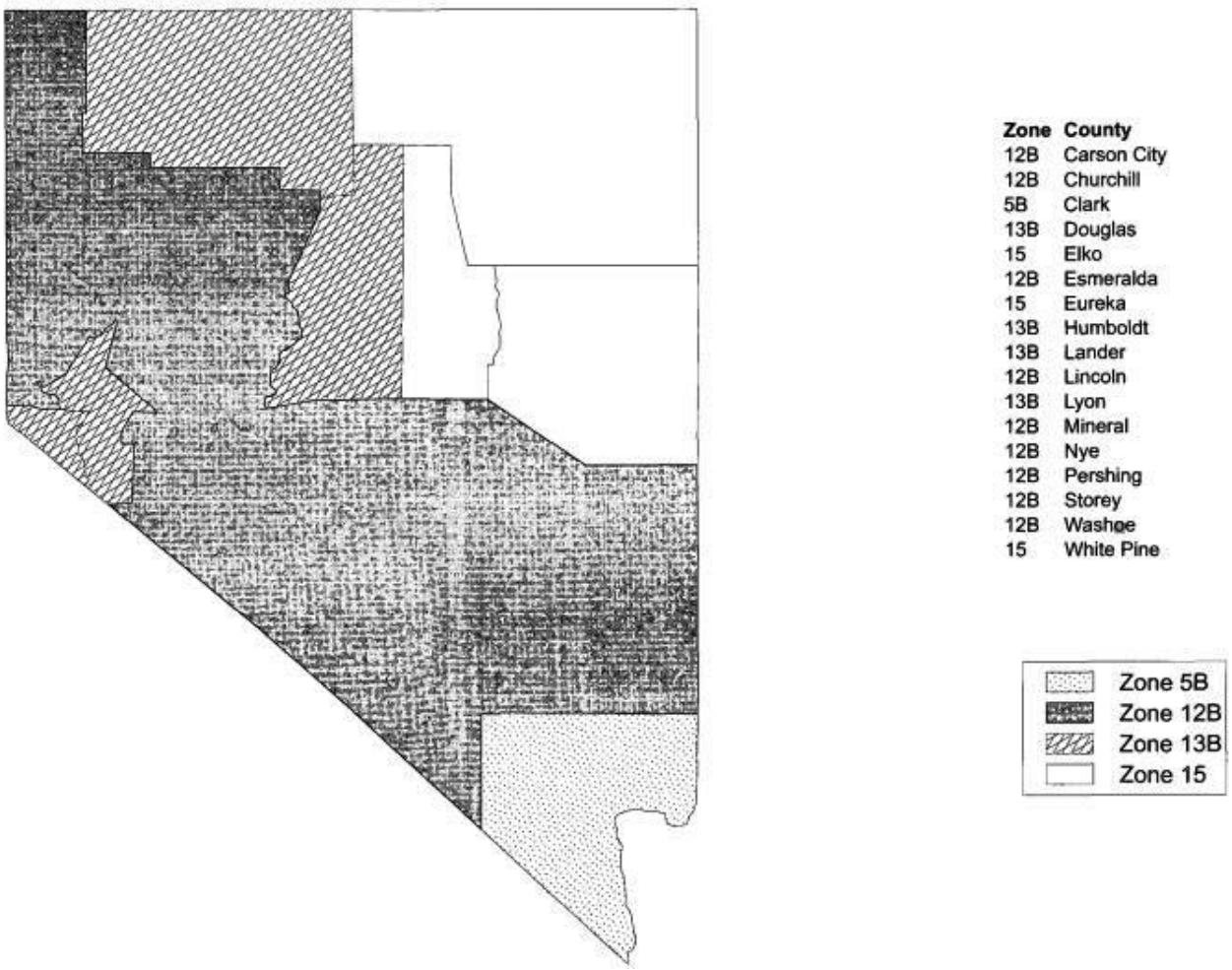


Figure 7-1. IECC Climate Zones in Nevada, USA

DSM-13

Residential Codes and New Construction
NV Energy
Program Year 2025

Measurement and Verification Report
March 1, 2026

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TABLE OF CONTENTS

1 EXECUTIVE SUMMARY

This Measurement and Verification ("M&V") report provides verified ex-post energy and demand impacts achieved by the Residential Codes and New Construction Program ("Program") that NV Energy offered to Nevada Power Company ("NPC") customers during 2025. This M&V report is provided by the Evaluator, Qualus LLC (formally ADM Associates Inc., which was acquired by Qualus LLC in July 2025), an independent, third-party contractor that provides evaluation and M&V services and reports for numerous electric and gas utility clients.

The Program is a demand side management ("DSM") program that provides incentives for new home builders to construct energy efficient dwellings that save at least ten percent of annual energy consumption compared to equivalent, code-compliant dwellings.[1]

The 2025 Program achieved energy savings by incentivizing participating builders to install various above-code components, including the following energy efficiency ("EE") measures:

1. Space conditioning measures, including:
    - high efficency heating, ventilation, and air conditioning ("HVAC") equipment, and
    - building-shell measures, e.g., above-code insulation, radiant barriers, and shading.
2. Heat Pump Water Heaters ("HPWH").
3. Above-code efficient lighting, e.g., ENERGY STAR® light emitting diode ("LED") bulbs.
4. Efficient mechanical ventilation measures, e.g., Energy Recovery Ventilator ("ERV") systems that recoup up to 75 percent of energy during the process of exchanging the outgoing conditioned air with incoming fresh outside air.
5. Smart thermostats.

During Program Year 2025 ("PY2025"), according to Program tracking data from NV Energy's program tracking database, NV Energy provided incentives for incorporating the above EE measures in 2,917 new homes. Across the Program population of 2,917 dwellings:

- Average ex-post verified annual energy savings per dwelling is 1,755 kilowatt hours ("kWh"), a 14.7 percent improvement compared to equivalent, code-compliant dwellings.
- Minimum ex-post verified annual energy savings is 591 kWh, a ten percent improvement from a comparable code-compliant dwelling.
- Maximum ex-post verified annual energy savings is 6,597 kWh for an all-electric dwelling with an air-source heat pump ("ASHP"), a HPWH, and other measures that collectively achieved a 25 percent improvement from a comparable code-compliant dwelling.
- A subset of 1,376 dwellings received smart thermostats (either one or two per premise).[2]

During the first quarter of 2025, the Evaluator reviewed the Program design and discussed these topics with the Program implementation team: tracking data; ex-ante savings modeling and calculations; and M&V methodologies for determining the Program's ex-post verified savings. To subsequently determine ex-post verified energy savings, the Evaluator selected an M&V sample

[1] See https://www.nvenergy.com/save-with-powershift/res-new-construction.

[2] All dwellings received multiple EE measures, i.e., none received only smart thermostats.

of 54 dwellings for which the Evaluator performed engineering desk reviews supplemented by 24 M&V on-site inspections. Engineering desk reviews for the M&V sample of 54 dwellings achieved statistical precision of ±9.94 percent at the 90 percent confidence level.

In the Evaluator's judgement, there is relatively low M&V uncertainty with respect to the Ekotrope[3] energy modeling software that is used by the Program to determine ex-ante claimed savings. Therefore, the Evaluator also employs Ekotrope models and associated reports to determine ex-post verified savings.

When conducting the engineering desk review for the M&V sample of 54 dwellings, the Evaluator reverse engineered all Ekotrope calculations that directly impacted the Program's savings estimates. While checking and validating Ekotrope calculations, the Evaluator found relatively small differences from the ex-ante claimed savings per premise. Across the 54 M&V samples, the Evaluator determined ex-post verified savings of 4,741.5 kWh per dwelling, which represents 97.3 percent of the average per-dwelling ex-ante savings of 4,875.1 kWh. As such, the M&V analyses resulted in the Program-level gross realization rate ("RR")[4] of 97.3 percent.[5]

Of the 54 dwellings in the M&V sample, 52 received ASHPs and 47 received a HPWH. Table 1-1 provides a summary of M&V findings for ex-post verified energy impacts.

Table 1-1. Residential New Construction Energy Impacts (NPC only)

Measure Category	**Average Annual Savings per Dwelling (for the 54 dwellings in M&V Sample)**				
M&V Sample (54 dwellings)	Ex-ante kWh	Ex-post kWh	RR		
Cooling & Heating, e.g., ASHP	2,628.7	2,602.4	99.0%		
Water Heating, e.g., HPWH	1,685.7	1,640.2	97.3%		
Lighting, e.g., LED Bulbs	417.3	358.0	85.8%		
Smart Thermostat	252.7	250.2	99.0%		
Mechanical Ventilation, e.g., ERV	(109.3)	(109.3)	100.0%		
Total, M&V Sample	4,875.1	4,741.5	97.3%		
Program Level, All Homes:	**Ex-ante kWh**	**Ex-post kWh**	**RR**	**Ex-post first-year savings (kWh)**	
Program Level Total	**5,261,631.9**	**5,119,567.8**	**97.3%**	**2,881,986.9**	
Effective Useful Life ("EUL") (years) →					**15.0**
Ex-post Lifetime Energy Savings (megawatt hours or "MWh") →					**76,793.5**
Ex-post Summer Critical Peak Demand Savings (kilowatts or "kW") →					**1,843.5**

[3] Ekotrope (https://www.ekotrope.com/) is a proprietary energy model used by many DSM programs in the United States. Typical of proprietary energy models, Ekotrope does not reveal its algorithms for estimating the dwellings' energy savings. However, the Evaluator employs M&V techniques that effectively reverse engineer the Ekotrope algorithms, identify any errors, and enable the independent calculation of ex-post verified energy savings.

[4] RR is the quotient of ex-post verified energy savings and ex-ante claimed energy savings.

[5] The 54 M&V samples were the 54 dwellings with the highest ex-ante claimed energy savings. Those dwellings were selected for M&V analyses because relatively high ex-ante savings may correspond to overestimated ex-ante savings. In other words, if M&V analyses were to find any problems with ex-ante claimed savings, the problems would most likely be found in these 54 high-savings homes. If any significant issues had been found in those homes, the Evaluator would have expanded the M&V sample to investigate the potential of similar issues in the rest of the PY2025 population. However, the Evaluator did not find significant issues in the M&V sample of 54 homes, for which the RR varied from 97.3 percent to 100 percent for all measure categories other than Lighting.

A new federal energy code for central air conditioners ("CAC") and ASHP became effective on January 1, 2023.[6] The Evaluator verified that the Program correctly interpreted the new code and did not overestimate cooling or heating savings from CAC or ASHP measures.

During PY2025, the Program also conducted online education and training events for southern Nevada builders. The online education and training was provided by the Circuit Riders[7] during June, July, August, and September.[8] Training topics included compliance with new requirements in the 2024 International Energy Conservation Code (IECC).[9] Energy efficiency training topics included HVAC system design, optimization, and above-code HVAC systems.

The Evaluators did not perform M&V for the 2025 Program in northern Nevada because northern Nevada builders did not apply for Program rebates or participate in education and training events.Following are the Evaluator's going-forward recommendations. During 2026, the Program should:

- Continue its rigorous oversight of HERS® Raters[10] to ensure quality control of Ekotrope inputs and reports.
- Continue to emphasize and enforce quality control procedures for Program tracking data; the quality and accuracy of tracking data improved significantly in PY2025, but it is important to not assume that data quality will remain high unless it remains a high priority.
- Continue to enforce the Program rule that incentives will not be provided for any dwelling that was completed more than 180 days prior to the date of its application for incentives.
- Continue to only accept applications for dwellings with above-code ASHP or CAC.
- Continue to encourage builders to install high efficiency mechanical ventilation measures, including ENERGY STAR certified ventilating fans, heat-recovery ventilators ("HRV"), and ERVs. These high efficiency mechanical ventilation measures provide significant energy savings, improve occupant comfort, and ensure healthy rates of fresh air turnover. HRV and ERV systems are designed to provide the highest energy savings by transferring heat across the incoming and outgoing airstreams. ERVs optimize occupant comfort by also transferring moisture across the incoming and outgoing airstreams.[11]
- Promote lighting controls to optimize energy savings from lighting measures.
- Ensure that the Program achieves or exceeds the five percent requirement for the Program's post-completion inspections.
- Enable the Evaluators to attend and observe the Program's education and training events.

[6] See https://www.iccsafe.org/wp-content/uploads/ICC-Guidance-re-DOE-HVAC-Updates-in-2023.pdf.

[7] Circuit riders are energy efficiency professionals who perform outreach and training for industry stakeholders such as individual jurisdictions, architect and engineering offices, and building associations. Circuit riders provide real-time targeted guidance, support, and technical assistance.

[8] No in-person sessions were conducted in 2025 because no builders registered for on-site training.

[9] The 2024 IECC can be found at https://codes.iccsafe.org/content/IECC2024P1.

[10] HERS® Raters are the certified professionals who use the Ekotrope energy modeling software to determine the Program's ex-ante claimed energy savings per dwelling. See https://www.resnet.us/raters/hers-raters/.

[11] See https://www.energystar.gov/ia/partners/prod_development/new_specs/downloads/hrv_erv/herv_prog_req.pdf.

2 PROGRAM BACKGROUND

The Program was designed to help residential customers reduce energy consumption by incentivizing new home builders to construct above-code, energy-efficient homes that are healthier and save customers money.[12] The Program provides rebates for builders to offset construction costs for new homes that are at least ten percent more efficient than local code requirements.

To qualify for the Program, the new homes may be single-family or multifamily homes (up to four units per foundation), and ENERGY STAR certification is required.

As shown in the following list, the Program offers rebates of $10.00 per one percent improvement increment starting at an improvement increment of ten percent. At an improvement increment of 18 percent, rebates increase to to $20.00 per one percent improvement increment.

- 10 percent to 17 percent improvement: $100 - $170 rebate per home
- 18 percent to 25 percent improvement: $360 - $500 rebate per home[13]

A rebate of $20 per thermostat is also provided for ENERGY STAR-certified smart thermostats.

Participating builders are required to complete a builder participation agreement and use a Program-approved HERS® Rater for each dwelling for which the Program provides incentives. The Program recruitment brochure and manual are available at the following links:

- www.nvenergy.com/publish/content/dam/nvenergy/brochures_arch/save-with-powershift/res-construction/Builder_Recruitment_Brochure_Nevada.pdf
- www.nvenergy.com/publish/content/dam/nvenergy/brochures_arch/save-with-powershift/res-construction/New-Construction-and-Codes-Program-Manual.pdf

Figure 2-1 provides a depiction of ex-ante claimed savings per dwelling for the PY2025 Program.

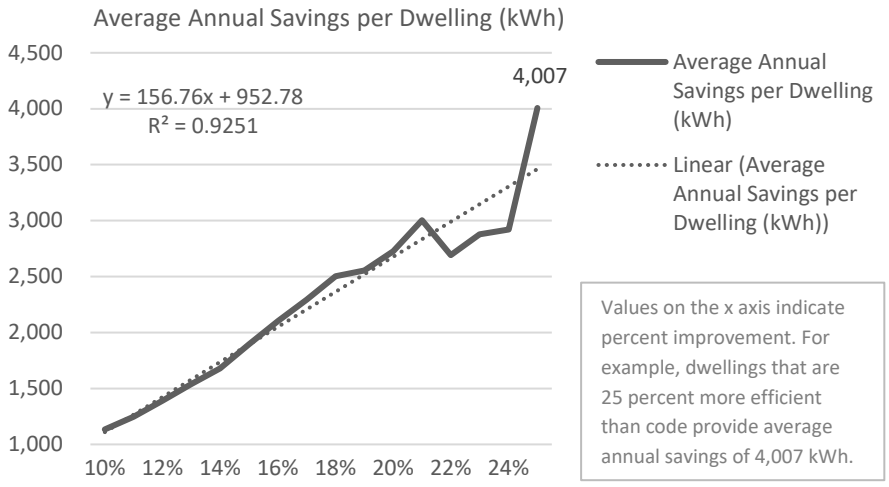

Figure 2-1. Ex-ante Savings by Percent Improvement from At-Code

[12] See https://www.nvenergy.com/save-with-powershift/res-new-construction.

[13] $500 is the maximum rebate provided by the Program.

Table 2-1 provides a list of the average ex-ante claimed savings per dwelling for each of the "percent improvement" bins. For example, the dwellings in the ten percent improvement bin have ex-ante claimed savings averaging 1,134 kWh per year, whereas dwellings in the 25 percent improvement bin have ex-ante claimed savings averaging 4,007 kWh per year.

Table 2-1. Average Ex-ante Savings per "Percent Improvement" Bin

Percent Improvement Above Code	Average Annual Savings per Dwelling (kWh)
10	1,134
11	1,248
12	1,390
13	1,538
14	1,679
15	1,893
16	2,102
17	2,293
18	2,504
19	2,556
20	2,725
21	3,004
22	2,691
23	2,879
24	2,920
25	4,007

Figure 2-2 provides a depiction of the ex-ante savings per measure category for the dwellings that were selected for the M&V sample.

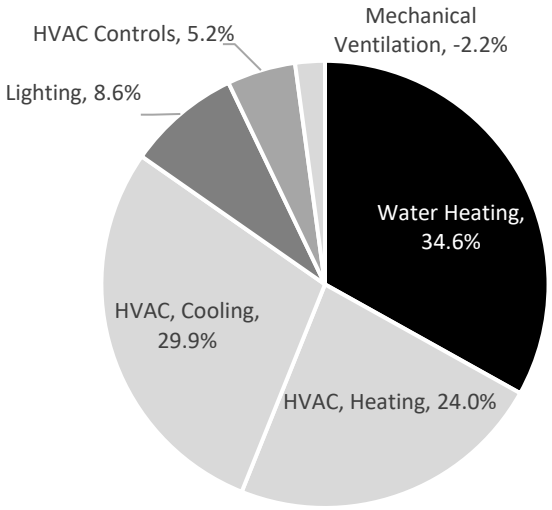

Figure 2-2. Ex-ante Savings by Measure Category, M&V Sample

3 MEASUREMENT AND VERIFICATION METHODOLOGY

3.1 Overview of M&V Approach

Many DSM portfolios around the United States include programs for residential new construction, which are typically evaluated through the following M&V methodologies:

1. Energy simulation coupled with onsite verification.
2. Partially deemed savings calculations based on a Technical Reference Manual ("TRM") and/or work papers and engineering calculations.

The Evaluator used both of those M&V methodologies for the PY2025 Program evaluation.

Ex-ante claimed energy savings and ex-post verified energy savings were determined using Ekotrope's proprietary energy modeling software. Ekotrope is used for many DSM programs in the United States. As is typical for proprietary energy models, Ekotrope does not reveal its actual algorithms that determine estimated energy savings for each dwelling in a given residential new construction program. Therefore, for the PY2025 Program evaluation, the Evaluator reverse engineered Ekotrope calculations for the 54 dwellings that the Evaluator randomly sampled for the M&V desk review.

3.2 Review of Program Design, Program Tracking Data, and Ekotrope Savings Estimates

The Evaluator reviewed the Program design during the first quarter of PY2025. The Evaluator subsequently discussed the following topics with the implementation team: program tracking data; ex-ante savings modeling and calculations; and M&V methodologies that would be used to determine ex-post verified savings for the 2025 Program.

From its review of Program tracking data, the Evaluator concluded that the ex-ante claimed savings estimates provided by the Ekotrope energy modeling software were generally reasonable. It is also apparent that the Program systematically checked the ex-ante claimed savings estimates to ensure overall data quality for the Program tracking data. The Evaluator verified that there were no duplicate entries in program tracking data.

3.3 Use of Ekotrope for M&V Analyses

The Program was evaluated using Ekotrope's efficiency software, which incorporated inputs from a variety of parameters and calculated the difference in savings relative to a pre-defined baseline model home. The baseline that the Program utilized for PY2025 Ekotrope models was "IECC 2018 Fuel Summary Comparison Fed. Min. Equip"[14] for a user-defined reference home with parameters relevant to HVAC efficiency and the thermal envelope integrity such as:

- Thermostat Cooling Setpoint
- Thermostat Heating Setpoint
- Summer Shade Amount

[14] This is a predefined baseline model home that is part of the Ekotrope model.

- Winter Shade Amount
- Thermal Transmittance (also known as "U-Value") of Ceiling
- Foundation Wall U-Value
- Joist U-Value
- Frame Floor U-Value
- Attached Garage Wall U-Value
- Slab Floor
- Infiltration Value, i.e., Air Changes per Hour at 50 Pascals air pressure ("ACH50").
- Duct Leakage, i.e., the rate of leakage as the quotient of x and y, where x is Cubic Feet per Minute at 25 Pascals air pressure ("CFM25") and y is square feet of Conditioned Floor Area ("CFA"), for which the common unit of measure is described as CFM50/CFA.
- Duct Insulation
- Duct Location
- Window U-Value
- Window Solar Heat Gain Coefficient
- Gas Annual Fuel Utilization Efficiency
- Heating Capacity
- ASHP Heating Seasonal Performance Factor ("HSPF")
- Cooling Seasonal Energy Efficiency Ratio ("SEER")
- CAC Unit Capacity

In collaboration with Ekotrope, the Program provided the Evaluator the exact Ekotrope models used in the estimation of ex-ante savings for the entire PY2025 population. The Evaluator's ex-post analysis included 54 dwellings that were sampled from the PY2025 population.

3.4 M&V Sampling Plan

The Evaluator selected a quasi-random M&V sample of Program participants to determine ex-post verified energy savings for the PY2025 Program.[15]

Sample size was calculated to achieve statistical precision of ±10.0 percent at the 90 percent confidence level (also called 90/10 confidence). Statistical precision relates to the coefficient of variation ("CV") for program participants' energy savings. The CV is defined as:

Equation 3-1

$$CV(x) = \frac{Standard\ Deviation(x)}{Mean(x)}$$

[15] The "quasi-random" M&V sample refers to the Evaluator's selection of M&V samples from the dwellings for which the Program reported the highest ex-ante claimed energy savings. The Evaluator selected those dwellings because relatively high ex-ante savings may correspond to overestimated ex-ante savings. In other words, if M&V analyses were to find any problems with ex-ante claimed savings, the problems would most likely be found in these high-savings dwellings.

Where x is participants' average expected energy savings. Residential program evaluations generally utilize a CV of 0.5.[16] When it is practical to do so, it is also an accepted M&V method to employ a calculated CV; the Evaluator did so in this instance in which the PY2025 Program population of 2,917 dwellings has a standard deviation of 801 kWh and mean of 1,804 kWh, resulting in a CV of 0.444.

Using the following formula, the M&V sample size (n_o) was determined to be 54 dwellings:

Equation 3-2

$$n_0 = \left[\frac{1.645 \times CV}{P}\right]^2$$

Where,

1.645 = Z score for 90 percent confidence interval in a normal distribution
CV = coefficient of variation (0.444)
P = required relative precision (10 percent)

Thus, the Evaluator performed engineering desk reviews for an M&V sample of 54 dwellings to determine annual energy savings achieved by the PY2025 Program. The M&V sampling for the PY2025 Program achieved statistical precision of ±9.94 percent at the 90 percent confidence level.

3.5 Engineering Calculations – HVAC Savings and Smart Thermostat Savings

3.5.1 HVAC (i.e., Cooling and Heating) Savings

From the M&V sample of 54 relatively "high-saver" dwellings, the Evaluator observed that the Program claimed mean cooling savings of 1,458 kWh per year per dwelling and mean heating savings – primarily due to ASHP – of 1,171 kWh per year per dwelling.[17]

For M&V analyses of ASHP measures, the Evaluator employed an industry standard engineering equation found in the Arkansas Technical Reference Manual ("TRM"), Version 10.1[18] to determine ex-post verified savings for ASHP measures that the Program caused to be installed in PY2025. Following is the specific equation for calculating annual kWh savings for ASHP equipment.

Equation 3-3

$$Annual\ kWh\ Savings = \frac{kBtu}{hr} \times EFLH_c \times \left(\frac{1}{SEER_{base}} - \frac{1}{SEER_{new}}\right) + \frac{kBtu}{hr} \times EFLH_h \times \left(\frac{1}{HSPF_{base}} - \frac{1}{HSPF_{new}}\right)$$

[16] National Renewable Energy Laboratory's Uniform Methods Project, Chapter 11: Sample Design Cross Cutting Protocol (https://www.nrel.gov/docs/fy17osti/68567.pdf).

[17] The Program's ex-ante claimed savings were created in Ekotrope (https://www.ekotrope.com/), a proprietary energy model that is used by many DSM programs in the United States. Typical of proprietary energy models, Ekotrope does not reveal its algorithms for estimating energy savings for each dwelling.

[18] See https://media.ark.org/psc/TRM-10.1-Combined.pdf.

Where,

kBtu/hr = Unit cooling capacity or unit heating capacity, measured for each treatment home, equivalent to 12 multiplied by tonnage.

$EFLH_c$ = Equivalent Full Load Hours (cooling), which the Evaluator verified for each ASHP in the M&V sample of 54 dwellings.

$SEER_{base}$ = SEER for the baseline or reference home: 14.3,[19] which is the code requirement for dwellings permitted after January 1, 2023.[20]

$SEER_{new}$ = SEER2 for the new home, which the Evaluator verified for each ASHP in the M&V sample of 54 dwellings.

$EFLH_h$ = EFLH (heating), which the Evaluator verified for each ASHP in the M&V sample of 54 dwellings.

$HSPF_{base}$ = HSPF for the baseline or reference home: 7.5 HSPF2, the code requirement for dwellings permitted after January 1, 2023.

$HSPF_{new}$ = HSPF2 for the new home, which the Evaluator verified for each ASHP in the M&V sample of 54 dwellings.

A new federal energy code for AC and ASHP became effective on January 1, 2023. The Evaluator verified that the Program correctly interpreted the new code and did not overestimate cooling or heating savings from ASHP measures.

From the above analyses of AC and ASHP measures, the Evaluator developed the following key findings, which are mentioned here because they apply to the discussion of smart thermostat savings in Section 3.5.2:

- For the Program's cooling measures (i.e., ASHP units in the M&V sample), the ratio of ex-post verified savings to ex-ante claimed savings is 99.1 percent.
- For the Program's heating measures (i.e., ASHP units in the M&V sample), the ratio of ex-post verified savings to ex-ante claimed savings is 98.9 percent.
- Across all the Program's HVAC measures, the weighted-average ratio of ex-post verified savings to ex-ante claimed savings is 99.0 percent.

3.5.2 Smart Thermostat Savings

Smart thermostats save energy by using algorithms in their proprietary software to incrementally (and continuously) reduce energy consumption for HVAC equipment. For smart thermostats installed through this Program, the ex-ante claimed kWh savings were calculated using the assumption that smart thermostats will save six percent of annual cooling and heating energy consumption.

In PY2025, a total of 1,672 smart thermostats were installed in 2,670 dwellings with CAC units, and the Program claimed savings of 230 kWh per year per smart thermostat. For dwellings with

[19] Effective January 1, 2023, the U.S. Department of Energy changed the way HVAC systems are tested and updated national standards for HSPF and SEER. This change also required new rating values and nomenclature to denote efficiency ratings, i.e., "HSPF2" for heating efficiency and "SEER2" for cooling efficiency. See https://www.energy.gov/femp/purchasing-energy-efficient-residential-central-air-conditioners.

[20] See https://www.iccsafe.org/wp-content/uploads/ICC-Guidance-re-DOE-HVAC-Updates-in-2023.pdf.

ASHP units, a total of 136 smart thermostats were installed in 247 homes, and the Program claimed savings of 353 kWh per year per smart thermostat.

The Evaluator analyzed the smart thermostat engineering calculation that the Program used to develop the ex-ante claimed savings of six percent of cooling and heating energy consumption. The Evaluator determined that the savings estimate of six percent of cooling and heating energy consumption is a reasonable estimate.

As mentioned at the end of the previous section, the Evaluator subsequently determined that, across all the Program's HVAC measures, the weighted-average ratio of ex-post verified savings to ex-ante claimed savings is 99.0 percent. To ensure that the six percent savings for smart thermostats is accurately applied to the Program's measured and verified energy consumption for HVAC measures, the Evaluator multiplied the 99.0 percent ratio by the Program's ex-ante claimed savings to determine ex-post verified savings for smart thermostats.

3.6 Engineering Calculation – HPWH (i.e., Hot Water) Savings

From the M&V sample of 54 dwellings, the Evaluator observed that the Program claimed hot water savings – primarily due to HPWH – that averaged 1,686 kWh per year per dwelling. To determine ex-post verified savings for HPWH measures, the Evaluator employed an industry standard engineering equation found in the Pennsylvania TRM, Volume 2: Residential Measures, Revised February 2021.[21] Following is the specific equation for calculating annual kWh savings for HPWH measures.

Equation 3-4

$$Annual\ kWh\ Savings = \left(\frac{1}{UEF_{baseline}} - \frac{1}{UEF_{ee}}\right) \times \text{HW} \times 8.3 \times (T_{out} - T_{in}) \div 3412$$

Where,

$UEF_{baseline}$ = Uniform Energy Factor of the baseline or reference home's water heater: the Evaluator used the formula provided in the 2022 ANSI/RESNET/ICC 301 Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units using an Energy Rating Index,[22] Table 4.2.2(1), "Service water heating systems," which provides the following formula for the baseline (reference home) water heater: UEF = 0.97 – 0.00132 × gallons of storage capacity of water heater; the Pennsylvania TRM provides a similar "default" value of 0.92.

UEF_{ee} = Uniform Energy Factor for the new home's HPWH, which the Evaluator verified for each HPWH in the M&V sample.

HW = Hot water usage per year, calculated as the product of 45.5 gallons per day[23] and 365 days per year.

[21] See https://www.puc.pa.gov/filing-resources/issues-laws-regulations/act-129/technical-reference-manual/.

[22] See ANSI/RESNET/ICC 301-2022, https://codes.iccsafe.org/content/RESNET3012022P1.

[23] "Residential End Uses of Water, Version 2." Water Research Foundation. Apr 2016. Page 5. https://www.circleofblue.org/wp-content/uploads/2016/04/WRF_REU2016.pdf.

8.3 = This term is the product of water density (8.3 pounds per gallon) and the specific heat of water (1 Btu per pound per degree Fahrenheit); the full description of this term is 8.3 Btu/gallon ˚F.

$T_{out} - T_{in}$ = Temperature differential between the cold water supply and the HPWH temperature setting; the Evaluator stipulates 60˚F (engineering judgement), which represents average T_{out} of 125 ˚F and average T_{in} of 65˚F.

3412 = This term is the conversion factor of 3,412 Btu/kWh.

3.7 Engineering Calculation – Lighting Savings

For the M&V sample of 54 dwellings, the Program claimed mean lighting savings of 417.3 kWh per year per dwelling. M&V calculations to determine ex-post verified energy savings per LED are consistent with Chapter 6 of The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures.[24]

M&V calculations used the following equation, for which the baseline general service lamp – consistent with IECC2018 – is a compact fluorescent lamp ("CFL").

Equation 3-5

$$Annual\ kWh\ savings\ per\ LED\ bulb = DeltaW_{CFL} \times HOUannual \times ISR \div 1000$$

Where,

$DeltaW_{CFL} = W_{CFL} - W_{LED}$

W_{CFL} = CFL baseline wattage, assumed to be an average of 15 W (M&V judgement).

W_{LED} = LED rated wattage, assumed to be an average of 9 W (M&V judgement).

1000 = conversion factor for Watts per kW.

HOU_{annual} = annual hours of use = 1,029 hours/year, i.e., 365 days/year multiplied by average daily usage of 2.82 hours (M&V judgement, as the Commission has accepted this HOU value for residential lighting since 2015).

ISR = "In-Service Rate," i.e., percentage of LEDs installed, assumed to be 100 percent (M&V judgement) as the builder provides and installs LEDs before occupancy.

When determining ex-post verified energy savings per dwelling for LEDs, the Evaluator assumed an average count of 58 bulbs per dwelling, which is consistent with NV Energy's assertion of "58 sockets per home" in a 2011 DSM Update Report.[25] In the Evaluator's judgement, the average count of 58 bulbs per dwelling continues to be a reasonable estimate for this PY2025 Program.[26]

[24] The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures: January 2012 - September 2016 (nrel.gov), https://www.nrel.gov/docs/fy18osti/70472.pdf

[25] See page 145 of 390, Docket 11-07026, "Application of Sierra Pacific Power Company d/b/a NV Energy for approval of its 2011 Annual Demand Side Management Update Report as it relates to the Action Plan of its 2011-2030 Integrated Resource Plan," 10144.pdf (state.nv.us).

[26] The Evaluator found an average of 59 bulbs across M&V on-site inspections of 24 dwellings, but uses 58 to maintain consistency with previous M&V reports for this Program.

3.8 M&V Determination for Mechanical Ventilation Savings

From the M&V sample of 54 dwellings, the Evaluator observed that the Program claimed mechanical ventilation savings that averaged negative 109.3 kWh per year per dwelling. The Evaluator employed engineering analyses to calculate baseline energy consumption per dwelling for mechanical ventilation, but there was insufficient Program data to calculate as-built energy consumption and energy savings.

There are no national standards for residential ventilating fans,[27] i.e., mechanical ventilation measures. However, there are two similar engineering calculations for determining the energy consumption of ventilating fans in the baseline or reference home. The 2022 ANSI/RESNET/ICC 301 Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units using an Energy Rating Index[28] provides the following formula:

$$\textit{Annual kWh consumption, baseline fan} = \textit{Fan Airflow (CFM)} \times 0.7\ \textit{W/CFM} \times 8.76$$

Ekotrope provides the following, similar engineering calculation for baseline energy consumption for mechanical ventilation. Ekotrope's calculation multiples the baseline fan's rated load (in Watts) by 8,760 hours per year, then divides the product by 1000 Watts per kW:

$$\textit{Fan Watts (i.e., rated wattage load of the baseline fan)} \times 8760 \div 1000$$

The Evaluator analyzed Ekotrope inputs and outputs for the M&V sample of 54 dwellings. The Evaluator verified that Ekotrope assumes baseline mechanical ventilation efficiency of 1.4 CFM per Watt, consistent with IECC 2018 and RESNET guidelines. The Evaluator accepted Ekotrope data for baseline mechanical ventilation assumptions. For the 54 dwellings in the M&V sample, average baseline energy consumption per unit is 367.3 kWh, average as-built savings per Ekotrope is 476.6 kWh, and average ex-ante claimed savings per dwelling is negative 109.3 kWh.

Comparing the ex-ante claimed savings for mechanical ventilation measures to the ex-post verified savings for the three previous Program years,[29] it is the Evaluator's judgement that the PY2025 Program may have moderately underestimated mechanical ventilation savings. Given the minimal impact at the Program level, i.e., a contribution of about negative two percent of Program-level energy savings, the Evaluator stipulated a 100 percent RR for the mechanical ventilation measure.

The Evaluator's judgement is that the Ekotrope algorithms are designed to account for ERVs higher energy load than standard vent fans in Ekotrope's "mechanical ventilation" category, while simultaneously assigning ERVs' incremental HVAC related savings to Ekotrope's "cooling savings" and "heating savings" categories. In other words, the Evaluator believes that ERVs do

[27] See https://appliance-standards.org/product/residential-ventilating-fans.

[28] See Table 4.2.2(1) ("Dwelling-Unit Mechanical Ventilation System fan energy") in ANSI/RESNET/ICC 301-2022, https://www.resnet.us/wp-content/uploads/ANSIRESNETICC301-2022_resnetpblshd.pdf. "CFM" is rated cubic feet per minute of fan air volume.

[29] Ex-post verified savings per unit for mechanical ventilation: 169.0 kWh in PY2022,146.8 kWh in PY2023, and 86.6 kWh in PY2024.

not actually increase overall energy consumption as implied by the mechanical ventilation category's average savings of negative 109.3 kWh for the 54 dwellings in the M&V sample.

3.9 Development of Energy Savings Curves

The Evaluator developed a methodology that employs energy savings curves to calculate the portion of annual energy savings that occurs during each of the 8,760 hours of a typical calendar year (every year that is not a Leap Year has 8,760 hours). An energy savings curve, which describes the temporal characteristics of energy savings, may be relatively flat across all hours of the year, or it may be highly variable depending on weather factors. For example, a continually operating ventilation fan achieves daily energy savings of 1/365 of its annual energy savings, whereas an air conditioner achieves almost all its energy savings during the cooling season.

Four energy savings curves were employed in the M&V analyses for the PY2025 Residential New Construction Program. The names and origins of these curves are as follows.

- HVAC: Commission-approved curve for prior-year Programs; this curve includes 85 percent and 15 percent weights for CAC and ASHP, respectively, consistent with their savings ratios in the Program. This curve accounts for 60.1 percent of Program savings.
- HPWH: Commission-approved curve for residential water heaters, as provided in the M&V analysis and report for the PY2011 NPC Low Income Weatherization Program; this curve accounts for 34.6 percent of Program savings.
- LED Lighting: Commission-approved curve used since 2012 for residential lighting; this curve accounts for 7.6 percent of Program savings.
- Mechanical Ventilation: flat curve; as ventilation fans operate continually, savings per hour are 1/8760 of annual savings; this curve accounts for negative 2.3 percent of Program savings.
- Blended Curve, New Homes: this is the Program-level curve that is weighted by ex-post verified energy savings for the four curves above.

3.10 Calculation of First-Year Energy (kWh) Savings

First-year kWh savings were calculated by determining what percentage of the year remained when each dwelling was certified complete by the Program. The number of days remaining in the calendar year were used together with the Blended Curve described in Section 3.9 to determine the portion of annualized kWh savings realized during the 2025 calendar year. First-year kWh savings were summed by month across each customer rate class in the Program to determine first-year kWh savings per month and rate class. Appendix A includes the first-year kWh savings table.

Further information on the Evaluator's methodology for calculating critical peak demand savings can be found in "M&V Technical Appendix 1." M&V topics described in this technical appendix include the Evaluator's calculation methodology for critical peak demand (kW) savings and the Evaluator's determination of monthly energy (kWh) savings per rate class.

3.11 Calculation of Critical Peak Demand (kW) Savings

As shown in Table 3-1, the monthly critical peak demand period is the hourly period per month during which NV Energy has historically experienced maximum system-level demand.

Table 3-1 Critical Peak Demand Periods

Month	NPC Peak Hour(s)
January	18, 19, 20
February	19, 20
March	20
April	20
May	17, 18
June	17, 18
July (potential summer peak and annual peak)	16, 17, 18
August (potential summer peak and annual peak)	16, 17
September	17
October	18, 19
November	18, 19
December	18, 19

Critical peak demand (kW) savings are calculated per month, per rate class utilizing ex-post savings determinations and the blended energy savings curve described in Section 3.9 above. The result is a two-dimensional matrix depicting hourly savings, per rate class, for all 8,760 hours of a typical calendar year. The Evaluator then inspected each monthly result to identify maximum average hourly kW savings during each month's designated peak demand period. Summer critical peak kW savings is defined as the maximum kW reduction expected in a typical calendar year during July or August peak demand hours indicated in Table 3-1, "Critical Peak Demand Periods."

The complete ex-post critical peak demand savings per month, per rate class are provided in Appendix A. For a detailed discussion of the Evaluator's analytical steps for determining critical peak demand (kW) savings, please refer to "M&V Technical Appendix 1."

3.12 Determination of EUL and Lifetime Savings

The 15-year EUL, an industry standard for Residential New Construction Programs, was agreed upon by NV Energy, the Evaluator, and the implementation contractor. Lifetime energy savings are the product of annual energy savings and the 15-year EUL.

4 M&V RESULTS

This chapter provides detailed M&V results and ex-post verified energy impacts for the PY2025 Residential Codes and New Construction Program, which NV Energy implemented in the NPC (southern) service area. This M&V report does not include discussion of building code outreach and training, as the Evaluator was not provided any documentation for those activities in 2025.

The PY2025 Program provided incentives for new home builders to construct energy efficient dwellings that save at least ten percent of annual energy consumption compared to equivalent, code-compliant dwellings.

4.1 Energy Impacts and Variances

The Evaluator verified that the PY2025 Program achieved energy savings by incentivizing participating builders to install above-code components including the following EE measures:

- Space conditioning measures, including high efficiency HVAC equipment and building shell measures such as above-code insulation, radiant barriers, and shading,
- HPWHs,
- General service lighting measures, i.e., LEDs,
- Above-code mechanical ventilation measures, and
- Smart thermostats.

The Evaluator verified that the PY2025 Program provided incentives for incorporating the above EE measures in 2,917 new homes in the NPC service area. Across the population of 2,917 dwellings:

- Average ex-post verified annual energy savings per dwelling is 1,755 kilowatt hours ("kWh"), a 14.7 percent improvement compared to an equivalent, code-compliant home.
- Minimum ex-post verified annual energy savings is 591 kWh, a ten percent improvement from a comparable code-compliant home.
- Maximum ex-post verified annual energy savings is 6,597 kWh for an all-electric dwelling with an ASHP, HPWH, and other EE measures that collectively achieved a 25 percent improvement from a comparable code-compliant dwelling.
- A subset of 1,376 dwellings received smart thermostats – either one or two per premise; note that all dwellings received multiple EE measures, i.e., none received only smart thermostats.

During the first quarter of 2025, the Evaluator reviewed the Program design and discussed these topics with the Program implementation team: tracking data; ex-ante savings modeling and calculations; and M&V methodologies for determining the Program's ex-post verified savings. To subsequently determine ex-post verified energy savings, the Evaluator selected an M&V sample of 54 dwellings for which the Evaluator performed engineering desk reviews (supplemented by 24 M&V on-site inspections). Engineering desk reviews for the M&V sample of 54 dwellings achieved statistical precision of ±9.94 percent at the 90 percent confidence level for the PY2025 Program.

In the Evaluator's judgement, there is relatively low M&V uncertainty with respect to the Ekotrope energy modeling software that is used by the Program to determine ex-ante claimed savings. Therefore, the Evaluator also employs Ekotrope models and associated reports to determine ex-post verified savings.

When conducting the engineering desk review for the M&V sample of 54 dwellings, the Evaluator reverse engineered all Ekotrope calculations that directly impacted the Program's savings estimates. While checking and validating Ekotrope calculations, the Evaluator found relatively small differences from the ex-ante claimed savings per premise. Across the 54 M&V samples, the Evaluator determined ex-post verified savings of 4,741.5 kWh per dwelling, which represents 97.3 percent of the average per-dwelling ex-ante savings of 4,875.1 kWh. As such, the M&V analyses resulted in the Program-level RR of 97.3 percent.

Synopsis of M&V determination of RR and ex-post verified energy impacts:

For the Cooling and Heating measure category, the RR is 99.0 percent due to minor variances when comparing the Evaluator's reverse engineered calculations to the Cooling and Heating savings that are found in Ekotrope reports for the M&V sample of 54 dwellings. As mentioned in the Mechanical Ventilation discussion in Section 3.8 above, Cooling and Heating savings that are reported by Ekotrope include incremental contributions from ERV measures. However, a high majority of Ekotrope's reported Cooling and Heating savings are due to ASHP and CAC equipment, i.e., HVAC measures.

Smart Thermostats also have a 99.0 percent RR. In the Evaluator's judgement, given that smart thermostats control HVAC measures, the HVAC RR of 99.0 percent is appropriate for smart thermostats. The extension of the HVAC RR to the RR for smart thermostats is also consistent with previous years' M&V methodology for this Program.

Water Heating and HPWH ex-ante claimed savings are not calculated transparently in Ekotrope. For HPWH, the Evaluator used the M&V calculations described in Section 3.6 to determine the 97.3 percent RR that the Evaluator applied to all Water Heating measures. Note that the Section 3.6 M&V methodology is the same that was used for previous Program years.

Lighting ex-ante claimed savings are not calculated transparently in Ekotrope. For example, the Evaluator could not determine the ex-ante assumption in Ekotrope for annual hours of use for Lighting measures. The Evaluator believes that Ekotrope uses a) higher bulb counts than the average of 58 LEDs that is stipulated herein, and b) higher hours of use than the 2.82 hour per day average that the Commission has accepted for residential lighting since 2015. The Evaluator used the M&V calculations described in Section 3.7 in the previous chapter of this report to determine the 85.8 percent RR that the Evaluator applied to all Lighting measures.

Mechanical Ventilation ex-ante claimed savings are not calculated transparently in Ekotrope, but the Evaluator believes the Ekotrope algorithms account for ERV's higher energy load than standard vent fans while simultaneously accounting for ERVs' incremental cooling and heating savings. Given the minimal impact at the Program level, i.e., a contribution of about negative two

percent of Program-level energy savings, the Evaluator determined a 100 percent RR for the mechanical ventilation measure.

Table 4-1 provides a summary of the Evaluator's findings for ex-post verified energy impacts.

Table 4-1. Residential New Construction Energy Impacts (NPC only)

Measure Category:	**Annual Savings per Home**				
M&V Sample (54 homes)	Ex-ante kWh	Ex-post kWh	RR		
ASHP	2,628.7	2,602.4	99.0%		
HPWH	1,685.7	1,640.2	97.3%		
Lighting, e.g., LED Bulbs	417.3	358.0	85.8%		
Smart Thermostat	252.7	250.2	99.0%		
Mechanical Ventilation	(109.3)	(109.3)	100.0%		
Total, M&V Sample	4,875.1	4,741.5	97.3%		
Program Level, All Homes:	**Ex-ante kWh**	**Ex-post kWh**	**RR**	**Ex-post first-year savings (kWh)**	
Program Level Total	**5,261,631.9**	**5,119,567.8**	**97.3%**	**2,881,986.9**	
				Effective Useful Life ("EUL") (years) →	**15.0**
				Ex-post Lifetime Energy Savings (megawatt hours or "MWh") →	**76,793.5**
				Ex-post Summer Critical Peak Demand Savings (kilowatts or "kW") →	**1,843.5**

M&V analyses achieved precision of ±9.94 percent at the 90 percent confidence level. Residential single family, or "RS," was the only rate class impacted by the PY2025 Program. Appendix A includes tables that provide Monthly Savings Per Rate Class.

4.2 Cost Effectiveness Inputs

Table 4-2 below provides the summarized M&V results needed to support NV Energy's cost-effectiveness modeling for the PY2025 Program.

Table 4-2 Recommended Inputs for Cost Effectiveness Modeling

Measure	**Total Count (Units)**	**Capacity Savings (kW/Unit)**	**Annual Savings (kWh/Unit)**	**Total Annual Savings (kWh/Year)**	**EUL**
Residential New Construction	2,917	0.6320	1,755.1	5,119,568	15.0
Total	**2,917**	**0.6320**	**1,755.1**	**5,119,568**	**15.0**

5 RECOMMENDATIONS

Following are the Evaluator's going-forward recommendations. During 2026, the Program should:

- Continue its rigorous oversight of HERS® Raters to ensure quality control of Ekotrope inputs and reports.
- Continue emphasizing and enforcing quality control procedures for Program tracking data; the quality and accuracy of tracking data improved significantly in PY2025, but it is important to not assume that data quality will remain high unless it remains a high priority.
- Continue to enforce the Program rule that incentives will not be provided for any dwelling that was completed more than 180 days prior to the date of its application for incentives.
- Continue to only accept applications for dwellings with above-code ASHP or CAC.
- Continue to encourage builders to install high efficiency mechanical ventilation measures, including ENERGY STAR certified ventilating fans, HRV, and ERV. These high efficiency mechanical ventilation measures provide significant energy savings, improve occupant comfort, and ensure healthy rates of fresh air turnover. HRV and ERV systems are designed to provide the highest energy savings by transferring heat across the incoming and outgoing airstreams. ERVs optimize occupant comfort by also transferring moisture across the incoming and outgoing airstreams.
- Promote lighting controls to optimize energy savings from lighting measures.
- Ensure that the Program achieves or exceeds the five percent requirement for the Program's post-completion inspections.
- Enable the Evaluators to attend and observe the Program's education and training events.

6 APPENDIX A: SAVINGS PER MONTH BY RATE CLASS

This appendix provides monthly energy (kWh) savings by rate class for calendar year 2025 (first-year savings) and calendar year 2026 (full-year savings), and monthly critical peak demand (kW) reduction values that correspond to a full year of energy savings.

Table A-1. Monthly kWh Savings Per Rate Class – 2025 (First Year)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	15,970	44,737	68,009	78,455	185,176	313,480	437,780	470,363	424,523	312,514	230,147	300,834	2,881,987
Total	**15,970**	**44,737**	**68,009**	**78,455**	**185,176**	**313,480**	**437,780**	**470,363**	**424,523**	**312,514**	**230,147**	**300,834**	**2,881,987**

Table A-2. Monthly kWh Savings Per Rate Class – 2026 (Full Year)

Rate Tariff	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RS	312,461	267,348	247,201	217,497	435,767	637,187	774,657	732,301	570,911	374,897	246,145	303,195	5,119,568
Total	**312,461**	**267,348**	**247,201**	**217,497**	**435,767**	**637,187**	**774,657**	**732,301**	**570,911**	**374,897**	**246,145**	**303,195**	**5,119,568**

Table A-3. Critical Peak Demand (kW) Reduction Per Month Per Rate Class

Rate Tariff	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RS	754.9	719.3	611.1	667.0	1,314.4	1,642.6	1,843.5	1,751.2	1,574.7	1,089.6	587.8	690.4
Total	**754.9**	**719.3**	**611.1**	**667.0**	**1,314.4**	**1,642.6**	**1,843.5**	**1,751.2**	**1,574.7**	**1,089.6**	**587.8**	**690.4**

DSM-14

Low Income Program
NV Energy
Program Year 2025

Measurement and Verification Report
March 10, 2026

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TABLE OF CONTENTS

1 EXECUTIVE SUMMARY

This Measurement and Verification ("M&V") report provides verified ex-post energy and demand impacts achieved by the Low Income ("LI") program that NV Energy offered to Sierra Pacific Power Company and Nevada Power Company ("SPPC" and, collectively with "NPC," "NV Energy") customers during 2025. This M&V report is provided by the Evaluator, Qualus LLC (formerly ADM Associates Inc., which was acquired by Qualus LLC in July 2025), an independent, third-party contractor that provides evaluation and M&V services and reports for numerous electric and gas utility clients.

The LI program is a demand-side management ("DSM") program that provides energy efficiency measures ("EEMs") to eligible limited-income residential customers. EEMs that NV Energy offered eligible customers in 2025 included:

- Light Emitting Diode ("LED") screw-in light bulbs (ENERGY STAR® certified),
- Refrigerator (ENERGY STAR certified),
- Chest Freezer (ENERGY STAR certified),
- Clothes Washer (ENERGY STAR certified),
- Electric Clothes Dryer (ENERGY STAR certified),
- Tier 1 and Tier 2 smart strips – also known as Advanced Power Supply ("APS") surge protectors,
- Dishwasher (ENERGY STAR certified), and
- Weatherization pilot project for income-eligible senior communities.

The chest freezer measure was discontinued in 2025, but some customer applications that were submitted and approved in late 2024 include chest freezers that are included in the LI program's 2025 tracking data. The LED lighting measure will be discontinued in 2026 after fully depleting the LI program's current inventory.

In 2025, the LI program served a total of 1,298 NPC customers (i.e., unique "households") and 477 SPPC households. The households (i.e., NV Energy customers) that participated in the 2025 LI program will save the following average kilowatt-hours ("kWh") per year per service territory:

- NPC households will save an average of 435.5893 kWh per year for 12.39 years.
- SPPC households will save an average of 419.0543 kWh per year for 12.47 years.

NPC results: As shown in Table 1-1 for the NPC LI program, ex-post verified savings are 565,395 kWh annually and lifetime savings are 7,007,778 kWh. Summer critical peak demand savings are 80.1 kilowatts ("kW"). Table 1-1 depicts key outcomes for the 2025 NPC LI program.

SPPC results: As shown in Table 1-2 for the SPPC LI program, ex-post verified savings are 199,889 kWh annually and lifetime savings are 2,491,835 kWh. Summer critical peak demand savings are 29.5 kW. Table 1-2 depicts key outcomes for the 2025 SPPC LI program.

Table 1-1. Summary of Energy Impacts, 2025 NPC LI Program

Measure Category	Customers Served by EEM[1]	EEMs Received by Customers	Annual Energy Savings (kWh)			Average Savings (kWh) per Customer[2]	Average Savings (kWh) per EEM	Effective Useful Life (years)	Lifetime Energy Savings (kWH)
			Ex-Ante	Ex-Post	Realization Rate				
APS	1,023	1,046	223,123	186,971	83.8%	182.7673	178.7485	10.00	1,869,710
Dishwasher	204	204	13,056	8,792	67.3%	43.1000	43.1000	11.00	96,716
Dryer	107	107	36,250	41,770	115.2%	390.3700	390.3700	14.00	584,774
Freezer	23	23	2,783	2,503	89.9%	108.8261	108.8261	14.00	35,042
LED Lighting	133	579	17,949	19,130	106.6%	143.8358	33.0400	8.17	156,293
Refrigerator	756	758	242,560	223,422	92.1%	295.5317	294.7520	14.00	3,127,908
Washer	353	353	68,835	68,687	99.8%	194.5800	194.5800	14.00	961,614
Weatherization Air Sealing	80	80	3,920	3,920	100.0%	49.0000	49.0000	11.00	43,120
Weatherization Pipe Wrap (Water Heater)	80	80	3,720	3,720	100.0%	46.5000	46.5000	13.00	48,360
Weatherization Water Heater Blanket	80	80	6,480	6,480	100.0%	81.0000	81.0000	13.00	84,240
All EEMs	**2,839**	**3,310**	**618,676**	**565,395**	**91.4%**	**435.5893**	**170.8142**	**12.39**	**7,007,778**

Table 1-2. Summary of Energy Impacts, 2025 SPPC LI Program

Measure Category	Customers Served by EEM[3]	EEMs Received by Customers	Annual Energy Savings (kWh)			Average Savings (kWh) per Customer[4]	Average Savings (kWh) per EEM	Effective Useful Life (years)	Lifetime Energy Savings (kWH)
			Ex-Ante	Ex-Post	Realization Rate				
APS	368	376	77,733	62,792	80.8%	170.6304	167.0000	10.00	627,920
Dishwasher	50	50	3,200	2,155	67.3%	43.1000	43.1000	11.00	23,705
Dryer	89	89	28,800	32,817	113.9%	368.7300	368.7300	14.00	459,438
Freezer	8	8	968	793	81.9%	99.1250	99.1250	14.00	11,102
LED Lighting	46	181	5,611	5,980	106.6%	130.0052	33.0400	8.17	48,859
Refrigerator	212	212	67,840	58,542	86.3%	276.1415	276.1415	14.00	819,588
Washer	165	165	32,175	32,106	99.8%	194.5800	194.5800	14.00	449,480
Weatherization Air Sealing	96	96	4,704	4,704	100.0%	49.0000	49.0000	11.00	51,744
All EEMs	**1,034**	**1,177**	**221,031**	**199,889**	**90.4%**	**419.0543**	**169.8292**	**12.47**	**2,491,835**

[1] "Customers served by EEM" indicates the number of customers who received the individual measure, for example, a washer. Customers may receive more than one measure. The total 2,839 is the sum of customers in all categories and is not unique. The total of unique NPC customers is 1,298.

[2] Average savings per customer (i.e., 435.5893 kWh) is the quotient of 565,395 kWh and 1,298 participating homes.

[3] "Customers served by EEM" indicates the number of customers who received the individual measure, for example, a washer. Customers may receive more than one measure. The total 1,034 is the sum of customers in all categories and is not unique. The total of unique SPPC customers is 477.

[4] Average savings per customer (i.e., 419.0543 kWh) is the quotient of 199,889 kWh and 477 participating homes.

First-year results for NPC and SPPC: First-year savings, i.e., savings that occurred during the 2025 calendar year, were 252,569 kWh for NPC and 86,821 kWh for SPPC.

Realization rates and variances for NPC and SPPC: The program-level realization rate ("RR"), which is the quotient of ex-post verified kWh savings and ex-ante claimed kWh savings, is 91.4 percent for NPC and 90.4 percent for SPPC. Main causes of RR variances from 100 percent include the following M&V findings.

- APS: The APS RRs for NPC, 83.8 percent, and SPPC, 80.8 percent, are significantly lower than 100 percent. Program data contained "TrickleStar" Tier 2 APS measures for which the Program assigned ex-ante claimed kWh of 234kWh and "Smart Strip" Tier 1 APS measures for which the Program assigned ex-ante claimed kWh of 167 kWh. There were also "Smart Strip" Tier 1 APS measures for which the Program assigned ex-ante claimed kWh savings as if the Tier 1 APS were Tier 2 APS, i.e., 234 kWh was claimed. The Evaluator has applied 167 kWh in these instances.[5] This led to the lower ex-post verified savings, which resulted in the suboptimal realization rate.
- Dishwasher: The RR is 67.3 percent for both NPC and SPPC due to customer survey data that indicated that 36.2 percent of the customers who received dishwashers have electric water heaters, while the remainder of the dishwasher recipients have gas water heaters. The ex-ante claimed savings had assumed electric water heaters for all dishwasher recipients.
- Dryer: RR is 115.2 percent for NPC and 113.9 percent for SPPC mainly due to the impact of heat pump dryers, for which the Evaluators found ex-post verified energy savings greater than the Program's ex-ante claimed energy savings.
- Freezer: RR ranges from 89.9 percent (NPC) to 81.9 percent (SPPC). All replaced freezers had the same model number in the Program tracking data; thus, the Evaluator a) assumed that the model number is invalid and not usable for this analysis, and b) conservatively imputed vintages for the population of replaced freezers.
- LEDs: RR is 106.6 percent for both NPC and SPPC. The Evaluators determined that the average wattage of actual baseline bulbs (old bulbs that were replaced) was 41.1 Watts due to the significant subset of the 2025 Program's replaced bulbs that were old fashioned Edison incandescent bulbs. The verified baseline wattage of 41.1 Watts, which exceeded the expected baseline wattage, caused the greater than 100 percent RR.
- Refrigerator: The Program reported that the replaced refrigerators' vintages, i.e., year of manufacture, averaged 2007. If that average vintage of 2007 were accurate, the RR would have been less than 60 percent. However, the Evaluators determined the verified average vintage of 2002, resulting in a RR of 92.1 percent for NPC and 86.3 percent for SPPC.
- Washer: The ex-ante claimed savings assumptions were reasonable and matched the Evaluator's ex-post verified savings calculations, hence the RR of 100 percent.

[5] It was known in early 2025 that the Program was phasing out the TrickleStar Tier 2 APS as soon as the remaining inventory from 2024 was depleted.

- Weatherization: The ex-ante claimed savings assumptions were reasonable, which the Evaluator verified by checking multiple California based TRMs as discussed in section 3.2.8 below, hence the RR of 100 percent.

Statistical precision: M&V analyses for the LI program are required to achieve sampling precision of ±10.0 percent at the 90 percent confidence level (also called 90/10 confidence). The LI program was implemented identically with the same non-weather sensitive EEMs across both territories. Thus, sampling precision was determined across the full population of 1,775 (1,298 NPC plus 477 SPPC) customers. A minimum of 67 sample points were needed to achieve 90/10 confidence. Calculated across the 1,026 participants who provided completed surveys for the 2025 LI program, ex-post sampling precision is ±2.57 percent at the 90 percent confidence level.

M&V activities and engineering analyses: Detailed descriptions of the Evaluator's verification activities and engineering analyses are provided in the body of this M&V report.

M&V recommendations: Based on findings discussed in this M&V report, the Evaluator provides the following recommendations to mitigate future evaluation risk by reducing uncertainties associated with future ex-ante savings assumptions, estimates, and calculations:

- For refrigerators: In program year 2025, online sign up required qualifying refrigerators to be manufactured before or in 2013. To help maintain a reasonable average per-unit savings in future years, the LI program must maintain this age requirement for qualified refrigerators. The rationale for this recommendation is that the federal minimum efficiency standard for refrigerators was increased for all refrigerators manufactured in 2014 and after. Thus, the LI program and NV Energy's customers would achieve significantly less energy savings per refrigerator (compared to the savings described in this M&V report) if replacing refrigerators manufactured in 2014 or after. The ex-ante estimated savings also needs to be reduced to mitigate risk of low RR; as stated in section 4.2 below, "(if the) average vintage of 2007 were accurate, the RR would have been less than 60 percent..."
- The LI program should continue exploring opportunities to target households with two or more occupants, as higher occupancy correlates with higher average savings per household. U.S. census data indicates that Nevada households have an average of 2.6 occupants, whereas the 2025 LI program's survey respondents reported an average of 1.9 occupants.
- The LI program's execution of satisfaction and M&V surveys improved in 2025 – 58 percent of participants completed surveys – as compared to 12.9 percent in 2024. While recognizing the overall improvement in this area of activity in recent years, the M&V team encourages an ongoing effort to continue to increase the response rates for program surveys. It is reasonable to expect that every recipient of valuable, free goods and services should accommodate requests for feedback through the satisfaction and M&V surveys.

- The LI program's ex-ante data quality was satisfactory overall in 2025 but could improve. Section 4.1 in this M&V report provides a detailed description of program tracking data duplicates and errors. The M&V team encourages an ongoing emphasis and priority regarding data quality. Specifically, the program should implement a monthly data quality assurance procedure to check program tracking data for duplicates and errors, e.g., sort all program records by premise or street address to identify duplicate records, errors, or other anomalies such as incorrect or omitted model numbers.
- For weatherization: Going forward in 2026, the LI program implementer should provide calculations and/or precise references for ex-ante claimed savings. The LI program should also implement customer satisfaction surveys to collect and track customer feedback. If the weatherization pilot project grows in 2026, the Evaluators will add M&V rigor for these EEMs by conducting M&V onsite inspections and primary data collection in coordination with NV Energy and its implementation contractor.

2 PROGRAM BACKGROUND

NV Energy offered its 2025 LI program to qualified customers throughout the NPC and SPPC service territories. Qualified customers were eligible to receive energy-efficient appliances and products at no cost to the customer.

The 2025 LI program is also known as NV Energy's PowerShift Qualified Appliance Replacement ("QAR") offering to income-qualified customers.[6] The QAR website provides customers information and describes the objectives as "…help NV Energy's residential customers, who meet income eligibility requirements, replace select older, inefficient household appliances with newer, more energy-efficient models (and includes additional energy-saving products that) reduce power consumption and reduce the cost of utilities." LI program offerings include LED bulbs (9 Watt), APS surge protector devices, and ENERGY STAR certified refrigerators, freezers, clothes washers, and clothes dryers.

NV Energy's general eligibility requirements for customers who participate in LI program:

- Each participant must be an NV Energy residential customer who owns or rents their home.
- Qualified appliances, such as a refrigerator and an electric clothes dryer, must have been manufactured before or in 2013 to be replaced by the LI program.[7] Model and serial number are required. Frequently asked questions and visual aids are provided to customers to help them correctly identify this information.
- Renters must provide the property owner's written permission to participate in the LI program.
- Participants must meet income eligibility requirements or participate in at least one of the eligible public assistance programs listed below:
  - Asian Community Resource Center
  - Boys and Girls Club Family Resource Center
  - Community Services Agency Weatherization Program
  - Community Services of Nevada ("CSN")
  - East Valley Family Service
  - HopeLink
  - Las Vegas Urban League
  - Nevada Rural Housing Authority
  - Project REACH (Southern Nevada Energy Assistance Program)
  - Southern Nevada Regional Housing Authority
  - Three Square

[6] See https://www.nvenergy.com/save-with-powershift/qualified-appliance-replacement.

[7] See https://www.nvenergy.com/save-with-powershift/qualified-appliance-replacement.

- Nevada Division of Welfare and Supportive Services - Energy Assistance Program
- CARE Chest
- Supportive Services for Veteran Families (SSVF)
- U.S. Department of Housing and Urban Development-VA Supportive Housing (VA-HUD-VASH)
- WCSD Family Resource Centers (Sun Valley, Sparks, Central Reno, North Valleys, and Feemster)

Proof of income is a requirement to qualify for the LI program. NV Energy's income eligibility requirements, provided in the following table, are consistent with the definition in Senate Bill ("SB") 448 (2021),[8] which is: "Low-income household means a household, which may include one or more persons, with a median household income of not more than 80 percent of the area median household income, based on the guidelines published by the United States Department of Housing and Urban Development."

Table 2-1. Eligibility for Qualified Appliance Replacement[9]

County	Number of Household People							
	1	2	3	4	5	6	7	8
Carson, Mineral, and Nye	$52,400	$59,850	$67,350	$74,800	$80,800	$86,800	$92,800	$98,750
Esmeralda	$58,000	$66,250	$74,550	$82,800	$89,450	$96,050	$102,700	$109,300
Clark	$57,150	$65,300	$73,450	$81,600	$88,150	$94,700	$101,200	$107,750
Humboldt	$54,600	$62,400	$70,200	$78,000	$84,250	$90,500	$96,750	$103,000
Lincoln	$53,400	$61,000	$68,650	$76,250	$82,350	$88,450	$94,550	$100,650
Lyon	$53,000	$60,600	$68,150	$75,700	$81,800	$87,850	$93,900	$99,950
Pershing	$56,500	$64,550	$72,600	$80,650	$87,150	$93,600	$100,050	$106,500
Churchill	$57,050	$65,200	$73,350	$81,500	$88,050	$94,550	$101,100	$107,600
White Pine	$58,200	$66,500	$74,800	$83,100	$89,750	$96,400	$103,050	$109,700
Eureka	$52,400	$59,850	$67,350	$74,800	$80,800	$86,800	$92,800	$98,750
Douglas	$60,950	$69,650	$78,350	$87,050	$94,050	$101,000	$107,950	$114,950
Reno, Storey and Washoe	$61,900	$70,750	$79,600	$88,400	$95,500	$102,550	$109,650	$116,700
Elko	$61,800	$70,600	$79,450	$88,250	$95,350	$102,400	$109,450	$116,500
Lander	$60,300	$68,900	$77,500	$86,100	$93,000	$99,900	$106,800	$113,700

Immediately following the above information on the PowerShift Qualified Appliance Replacement website, customers are provided "application" buttons that link to the required application form. In 2025, after the addition of the online application in PowerClerk there is only one single application form, and there is also a Spanish version.

According to the LI program's official tracking data (i.e., ex-ante claimed savings), 1,298 NPC households were provided with a total of 3,310 products and services, while 477 SPPC households were provided with a total of 1,177 products and services from the LI program in 2025.

The LI program tracking data indicates the following counts of implemented EEMs, unit savings per EEM, and total ex-ante savings per EEM.

[8] See https://www.leg.state.nv.us/Session/81st2021/Bills/SB/SB448_EN.pdf.

[9] Table taken from https://www.nvenergy.com/save-with-powershift/qualified-appliance-replacement.

Table 2-2. EEMs Reported in 2025 LI Program Tracking Data (i.e., Ex-Ante Data)

Measure Category	NPC Ex-Ante Summary from Program Tracking Data			SPPC Ex-Ante Summary from Program Tracking Data		
	Quantity Reported	Ex-Ante Unit Savings (kWh/year)	Ex-Ante Total Savings (kWh/year)	Quantity Reported	Ex-Ante Unit Savings (kWh/year)	Ex-Ante Total Savings (kWh/year)
APS	1,046	213.31	223,123	376	206.74	77,733
Dishwasher	204	64.00	13,056	50	64.00	3,200
Dryer	107	338.79	36,250	89	324.00	28,800
Freezer	23	121.00	2,783	8	121.00	968
LED Lighting	579	31.00	17,949	181	31.00	5,611
Refrigerator	758	320.00	242,560	212	320.00	67,840
Washer	353	195.00	68,835	165	195.00	32,175
Weatherization Air Sealing	80	49.00	3,920	96	49.00	4,704
Weatherization Pipe Wrap (Water Heater)	80	46.50	3,720	-	-	-
Weatherization Water Heater Blanket	80	81.00	6,480	-	-	-
TOTALS	**3,310**		**618,676**	**1,177**		**221,031**

As shown in Table 2-3, most households that participated in the 2025 LI program were provided with multiple measures.

Table 2-3. Count of Measure Categories Provided Per Household

Count of Measure Categories Received	NPC Customer Count	SPPC Customer Count	Total Customer Count
1 (received one EEM category, e.g., refrigerator only)	257	109	366
2 (received two EEM categories, e.g., refrigerator plus APS)	652	235	887
3 (received three EEM categories)	298	90	388
4 (received four EEM categories)	72	32	104
5 (received five EEM categories)	18	9	27
6 (received six EEM categories)	1	2	3
7 (received seven EEM categories)	0	0	0
8 (received eight EEM categories)	0	0	0
9 (received nine EEM categories)	0	-	0
10 (received all ten EEM categories)	0	-	0
Total customer count	**1,298**	**477**	**1,775**

No household received more than one each of the dishwasher, weatherization, refrigerator, freezer, washer, or dryer EEMs. However, numerous households were provided with multiple LED bulbs, up to a maximum of eight; the average number of LED bulbs provided per household was 4.35 for NPC participants and 3.94 for SPPC participants. Most participants who received APS devices were provided with only one APS; however, twenty-three NPC customers were provided with two APS devices and eight SPPC customers were provided with two APS devices.

3 M&V METHODOLOGY

This chapter provides a discussion of M&V methodologies for determining EEM installation, energy (kWh) savings, energy savings curves, critical peak demand (kW) savings, and years of effective useful life ("EUL").

3.1 Verification of Measures Installed

The Evaluator verified the 2025 LI program activity and implementation of the reported EEMs. The Evaluator reviewed the LI program tracking data, including EEMs, and ex-ante estimated savings values reported by the LI program. The Evaluator verified measure installation from LI program tracking data and from participants' responses to LI program surveys.

The Evaluator collaborated with the implementation contractor to develop participant surveys, which were administered by the implementor. Surveys were provided to all LI program participants to collect primary data, which informed the M&V analyses. Participant survey responses enabled the Evaluator to achieve the following.

- Verify that the participating customers received EEMs.
- Determine the installation rate per EEM.
- Determine the baseline light bulbs that were replaced by LED bulbs.

For the M&V analyses associated with the 2025 LI program, the statistical requirement is sampling precision of ±10 percent at the 90 percent confidence level (also called 90/10 confidence). A census of participants was surveyed, which would nominally comply with the sampling precision requirement. The Evaluator determined the ex-post sampling precision, which was calculated as follows.

To determine the required sample size for a simple random sample, first the coefficient of variation ("cv") for the subject population must be determined. The cv is defined as:

Equation 3-1

$$cv(x) = \frac{Standard\ Deviation(x)}{Mean(x)}$$

Where x is the average kWh savings per participant. Unless there is a compelling rationale for calculating a more precise cv value, it is typical to use a cv of 0.5 for M&V analyses for a given residential energy efficiency program that has a relatively homogeneous population. As the LI program population is relatively homogeneous (i.e., limited-income households), it is appropriate to apply the cv value of 0.5. The resulting sample size is estimated using the following formula:

Equation 3-2

$$n_0 = \left[\frac{1.645 \times cv}{rp}\right]^2$$

Where,

1.645 = Z score for 90 percent confidence interval in a normal distribution
cv = coefficient of variation
rp = required relative precision (plus or minus 10.0 percent)

To account for the number of participants in the LI program, a finite population correction is applied. The adjustment factor ("AF") is calculated as follows:

Equation 3-3

$$AF = 1 + n_0/N$$

Where,

n_0 = Sample size calculated prior to application of finite population correction
N = Population size (number of program participants)

The sample size with finite population correction (n_{fpc}) is calculated by dividing the uncorrected sample size estimate by the adjustment factor in the following equation.

Equation 3-4

$$n_{fpc} = {}^{n_0}/_{AF}$$

The LI program was implemented identically for all NV Energy locations and customers, and the measures distributed do not include any EEMs that are weather sensitive. Thus, there is not a compelling rationale to require unique sampling precision for NPC versus SPPC service areas. Given that the LI program population included 1,298 NPC customers and 477 SPPC customers – a total of 1,775 participants – a minimum of 67 sample points was needed.

The LI program survey collected data from 1,026 participants, resulting in ex-post sampling precision of ±2.57 percent at the 90 percent confidence level. The survey instrument is provided in Appendix A. The Evaluator's findings for EEM installation rates are provided in the following chapter.

3.2 Determination of Annual Energy (kWh) Savings

The Evaluator employed engineering analyses to determine annual energy (kWh) and demand (kW) savings attributed to the 2025 LI program. Ex-post verified savings for each measure category were determined according to the algorithms detailed in the subsequent sections.

3.2.1 LED Lighting

The LI program distributes a maximum of eight 9W LED screw-in bulbs (60W equivalent) per participating household. The Evaluator employed engineering analyses to determine ex-post verified energy savings. Ex-post verified energy savings per LED were calculated with methods developed by the Evaluator and consistent with chapter six of "The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures." [10]

The Evaluator used the following equation to calculate annual kWh savings per LED:

Equation 3-5

$$Annual\ kWh\ Savings = \left(\frac{deltaW_{INC} * \%_{INC} + deltaW_{HAL} * \%_{HAL} + deltaW_{CFL} * \%_{CFL}}{1000}\right) * HOU/year\ *\ ISR$$

Where,

W_{INC} = baseline wattage, old-fashioned incandescent bulbs replaced by LED = 60W[11]
W_{HAL} = baseline wattage of halogen bulbs that comply with the federal Energy Independence and Security Act of 2007 ("EISA")[12] = 43W
W_{CFL} = baseline wattage, compact fluorescent lamp ("CFL") = 15W
W_{LED} = LED rated wattage = 9W
$deltaW_{INC}$ = W_{INC} (i.e., old-fashioned incandescent bulbs replaced by LED) - W_{LED}
$deltaW_{HAL}$ = W_{HAL} (i.e., EISA compliant halogen bulbs replaced by LED) - W_{LED}
$deltaW_{CFL}$ = W_{CFL} (i.e., CFL bulbs replaced by LED) - W_{LED}
$\%_{INC}$ = percent of incandescent bulbs replaced by LED (57.85 percent)
$\%_{HAL}$ = percent of EISA compliant halogen bulbs replaced by LED (2.11 percent)
$\%_{CFL}$ = proportion of CFL bulbs replaced by LED (30.84 percent)
1000 = conversion factor for Watts per kW
HOU/year = annual hours of use, 2.82 hours per day • 365 = 1029.3 hours per year[13]
ISR = In-Service Rate ("ISR"), 100 percent (from M&V analysis of LI program data)

Baseline bulbs: During 2025, the Evaluator inspected 302 light bulbs that were replaced by new LED bulbs as the result of the LI program. Of those 302 baseline light bulbs, 57.85 percent were old-fashioned incandescent bulbs, 2.11 percent were EISA compliant halogen bulbs, 30.84 percent were CFLs, and 9.20 percent were LEDs.

[10] See https://www.nrel.gov/docs/fy18osti/70472.pdf.

[11] Baseline wattages are industry standards based on lumen output of installed lamps.

[12] See https://www.govinfo.gov/content/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.

[13] Hours per day from the Evaluator's LED Monitoring Study filed in PY2016.

For the LED Lighting measure category, the following calculations were employed to determine annual energy savings for LED light bulbs that were installed in light sockets inside the home:

Equation 3-6

$$\text{Average Watts per bulb replaced} = 60W \bullet 57.85\% + 43W \bullet 2.11\% + 15W \bullet 30.84\% + 9W \bullet 9.22\% = 41.1\ W\ \text{(baseline)}$$

Equation 3-7

$$\text{Annual savings per LED} = (41.1 - 9)\ \text{Watts} \bullet 1029.3\ \text{hours/year} \div 1000\ W/kW = 33.0\ kWh/\text{year savings}$$

3.2.2 ENERGY STAR Refrigerator

The 2025 LI program replaced old refrigerators – at least 11 years old – with ENERGY STAR refrigerators for which the Unit Energy Consumption ("UEC"), i.e., annual kWh usage, is known from the ENERGY STAR refrigerator database.

To determine ex-post verified annual energy savings for the new refrigerators, the Evaluator researched the specifications for all old, replaced refrigerators, determined the UEC, and calculated the difference between the old and new UEC. NV Energy's program tracking data provided records for model year, make, and model number for most old/replaced refrigerators.

Manufacturers have been required since the 1970s to employ a U.S. Department of Energy ("DOE") lab testing procedure to determine the rated annual energy consumption for refrigerators. These "at-manufacture" UEC ratings for old refrigerators are available in various databases. For this analysis, the Evaluator used the same refrigerator database that the Evaluator previously used for numerous M&V analyses, including the previous year's LI program and all of NV Energy's refrigerator recycling programs for program years 2010 through 2016.

The Evaluator identified at-manufacture UEC values for most old refrigerators listed in NV Energy's program tracking data. For old refrigerators for which the at-manufacture UEC value could not be identified, the Evaluator imputed an at-manufacture UEC value using average UEC per vintage for the known subset of refrigerators that were collected by the 2025 LI program.

The Evaluator subsequently adjusted each at-manufacture UEC value to account for age-related energy efficiency degradation, including *in situ* performance factors for which the DOE lab testing procedure does not account. The UEC adjustment methodology, which is the same method used previously for M&V analyses of NV Energy's programs (including the Evaluator's analysis of the 2020, 2021, 2022, 2023 and 2024 LI programs), is described by the following algorithm.

Equation 3-8

$$UEC_{adjusted,\ old\ unit} = \text{UEC at manufacture} \bullet [1 + (degradation^{age} - 1) \bullet (1 + \text{in situ delta})]$$

Where,

Degradation = factor accounting for refrigerator efficiency degradation = 1.0125/year;[14]
age = 2025 - vintage (i.e., year of manufacture) for each old refrigerator;
in situ delta = *in situ* performance adjustment [NPC: -19.2 percent; SPPC: -30.8 percent]; the *in situ* adjustments account for slower degradation in real-world conditions compared to the degradation predicted by the DOE lab testing procedure.

Degradation and *in situ* factors were developed using data and analysis prepared by the Cadmus Group ("Cadmus") in a 2009 study on refrigerator degradation for the California Public Utilities Commission ("CPUC"). This Cadmus study used data on refrigerator energy use obtained through two *in situ* monitoring efforts: a) a monitoring study that the Evaluator conducted in support of the evaluation of the California 2004-2005 Statewide Residential Appliance Recycling Program; and b) an additional in situ monitoring that Cadmus conducted as part of its study.

The product of these efforts was a database containing energy use obtained through both DOE testing and *in situ* monitoring for a sample of 321 units. Cadmus used the monitoring data to develop regression analyses comparing *in situ* energy consumption to UEC values calculated from the DOE test protocol. The Cadmus analyses also accounted for climate variances and household size. From these analyses, the following *in situ* delta values were determined.

Table 3-1. In Situ Adjustments to DOE Test Procedure

Occupants per Household	Climate Zone	*In Situ* Delta
1-2	Cool (SPPC)	-30.8%
	Warm (NPC)	-19.2%
3+	Cool (SPPC)	-16.0%
	Warm (NPC)	-6.4%

For this M&V analysis, the NPC climate is warm, the SPPC climate is cool, and participating households averaged 1.9 occupants according to survey responses. From these criteria, the Evaluator determined *in situ* delta values of -19.2 percent for NPC and -30.8 percent for SPPC. Following are examples of calculations for a refrigerator manufactured in the early 2000s that was replaced through the 2025 LI program.

[14] The same factor for refrigerator performance degradation was used for M&V analyses of NV Energy's PY2015 Second Refrigerator Recycling programs and PY2020, PY2021, PY2022, PY2023 and PY2024 LI programs.

Table 3-2. Example of UEC Analysis for Refrigerator Manufactured in the 2000s

Service area	Manufacturer and Model Number	Size (cu. ft.)	Vintage	UEC rating (kWh/year) at manufacture	Rate of annual degradation, DOE lab test protocol	UEC (current kWh/year), DOE protocol	*In situ* delta	UEC (current kWh/year) after applying *in situ* delta
NPC	Maytag model no. MSD2732GRW	27.3	2004	740	1.0125%	972	-19.20%	929
SPPC	Maytag model no. MSD2732GRW	27.3	2004	740	1.0125%	972	-30.80%	903

The NPC customer received a new ENERGY STAR refrigerator – Midea model 'MRT18S2AWW'– for which the UEC rating is 362 kWh per year; this customer's net energy savings is 929 kWh (old) - 362 kWh (new) = 567 kWh/year. The SPPC customer received a new ENERGY STAR refrigerator – Whirlpool model 'WRT138FFDW' – for which the UEC rating is 370 kWh per year; this customer's net energy savings is 903 kWh (old) - 370 kWh (new) = 533 kWh/year.

3.2.3 ENERGY STAR Freezer

The 2025 LI program replaced old freezers – at least 11 years old – with a Hisense model 'LFC050N6AWE' chest-style freezer for which the UEC of 196 kWh per year is known from the manufacturer website.[15]

To determine ex-post verified annual energy savings for the new freezers, the Evaluator researched the specifications for all old, replaced freezers, determined the UEC, and calculated the difference between the old and new UEC. All replaced models had the same model number, causing the Evaluator to conservatively impute vintages for those freezers.

Annual energy (kWh) savings per efficient freezer was determined using the same methodology described in the previous section (3.2.2) for ENERGY STAR refrigerators. Following are examples of calculations for two 1990s-vintage freezers that were replaced by the LI program.

Table 3-3. Example of UEC Analysis for Two Freezers Manufactured in the 1990s

Service area	Manufacturer and Model Number	Size (cu. ft.)	Vintage	UEC rating (kWh/year) at manufacture	Rate of annual degradation, DOE lab test protocol	UEC (current kWh/year), DOE protocol	*In situ* delta	UEC (current kWh/year) after applying *in situ* delta
NPC	Montgomery Ward model no. 80119	5.37	1992	347	1.01%	196	-19.20%	489
SPPC	Montgomery Ward model no. 80119	5.37	1992	347	1.01%	196	-30.80%	469

[15] See https://www.hisense-usa.com/support/home-appliance-refrigerators-5-0-cu-ft-chest-freezer-with-energy-star-lfc050n6awe.

The NV Energy customers in this example received a new Hisense model 'LFC050N6AWE' freezer for which the UEC rating is 196 kWh per year. In this example, the NPC customer's net energy savings are 489 kWh (old) - 196 kWh (new) = 293 kWh/year; the SPPC customer's net energy savings are 469 kWh (old) - 196 kWh (new) = 273 kWh/year.

3.2.4 ENERGY STAR Clothes Dryer

The LI program replaced old electric clothes dryers – at least 11 years old – with ENERGY STAR clothes dryers[16] for which estimated average UEC, i.e., annual kWh usage, is known from ENERGY STAR's clothes dryer database. To determine ex-post verified annual energy savings for the new dryers, the Evaluator developed an estimate of average baseline UEC for the old, replaced dryers, then calculated the difference between the old and new UEC.

The Evaluator used a 2015 Northeast Energy Efficiency Partnerships ("NEEP") residential electric clothes dryer baseline study[17] to develop the estimate of baseline UEC for dryers that were replaced by the 2025 LI program. The NEEP study – for which the onsite monitoring of 23 residential dryers occurred from April 2014 to January 2015 – "targeted homes with recently purchased (less than five years old) dryers…" that were representative of dryers available at that time. As such, the NEEP-monitored dryers were likely to have been manufactured in 2009 or more recently.

By comparison, 2001 (SPPC) and 2001 (NPC) are the average vintages for the old dryers that were replaced by the 2025 LI program. Although the NEEP dryers are several years newer, on average, it is the Evaluator's judgement that the 2015 NEEP dryer baseline study provides a reasonable proxy for a hypothetical Nevada baseline study for residential dryers.[18]

The NEEP baseline study found 993 kWh average annual energy usage for residential dryers, assuming average household occupancy of 2.81 residents; whereas, per its survey respondents, the 2025 LI program's dryers were installed in households with an average of 1.9 occupants.

The Evaluator developed an engineering model that correlates annual energy consumption of clothes dryers to household occupancy. The Evaluator found a linear relationship between occupancy and clothes dryers' annual energy consumption. Essentially, as the number of people in a residence increases, the quantity of clothes dryer loads increases, causing annual energy consumption to increase. This causal relationship applies to all clothes dryers, i.e., baseline dryers and ENERGY STAR dryers. A simple representation of the clothes dryer kWh consumption model – which quantifies the impact of household occupancy on annual energy savings – is provided in the following table.

[16] The 2025 LI program provided ENERGY STAR clothes dryer models GE/GTD72EBSNWS and LG/DLHC1455W.

[17] ERS. *Residential Electric Clothes Dryer Baseline Study*. NEEP. 2015.

[18] The Evaluators do not recommend a dryer baseline study in Nevada because the uncertainties related to ENERGY STAR dryer savings are not significant enough to justify using limited M&V funds for a dryer baseline study.

Table 3-4. Dryers – Impact of Household Occupancy on Annual Energy Savings

Household Occupancy (count of people)	UEC, baseline dryer, occupancy adjusted (kWh/year)	UEC, ENERGY STAR dryer[19], occupancy adjusted (kWh/year)	Unit Energy Savings, occupancy adjusted (kWh/year)
1.0	361.3	317.8	43.4
1.2	431.1	354.6	76.5
1.4	500.9	391.3	109.6
1.6	570.8	428.0	142.7
1.8	640.6	464.8	175.9
2.0	710.5	501.5	209.0
2.2	780.3	538.2	242.1
2.4	850.1	574.9	275.2
2.6	920.0	611.7	308.3
2.8	989.8	648.4	341.4
3.0	1059.6	685.1	374.5

For the ENERGY STAR dryers distributed to NV Energy customers through the 2025 LI program, for which the UEC is 394.5 kWh (SPPC) and 368.3 kWh (NPC) annually,[20] The Evaluator's engineering model provides the following algorithm for determining annual energy savings for ENERGY STAR dryers and heat pump dryers.

Equation 3-9

$$Annual\ savings\ (kWh)_{ENERGY\ STAR\ dryer} = 167.16 \bullet Occ - 0.825 \bullet UEC_{ENERGY\ STAR\ dryer} + 376.6$$

Where,

167.16	= coefficient for occupancy;
Occ	= count of occupants in the household;
- 0.825	= coefficient for annual energy consumption, ENERGY STAR dryers;
$UEC_{ENERGY\ STAR\ dryer}$	= average annual energy consumption, ENERGY STAR dryer; and
376.6	= constant.

3.2.5 ENERGY STAR Clothes Washer

The LI program replaced old electric clothes washers – at least 11 years old – with ENERGY STAR clothes washers[21] for which the Integrated Modified Energy Factor ("IMEF"), a key metric for determining average annual UEC, is known from ENERGY STAR's clothes washer database. The higher the IMEF value, the more efficient the clothes washer.

[19] This table is specific to an ENERGY STAR dryer for which the UEC is 608 kWh annually.

[20] ENERGY STAR uses average occupancy per U.S. household to calculate annual energy consumption for dryers.

[21] The 2025 LI program provided ENERGY STAR clothes washer model LG/WT7155CW.

To determine ex-post verified annual energy savings for the new clothes washers, the Evaluator employed an engineering analysis to estimate: (a) average UEC for baseline washers; (b) average UEC for new, energy efficient ("EE") washers; and (c) average energy savings for the new EE washers, which is equivalent to the difference between (a) and (b). The Evaluator employed the following equation taken from the Pennsylvania Technical Reference Manual ("PA TRM").[22]

Equation 3-10

$$\text{D } kWh = Cycles \times \left(\begin{array}{c} \frac{CAPY_{base}}{IMEF_{base}} \times \left(CW_{base} + DHW_{base} \times \%_{ElecDWH} + Dryer_{base} \times \%_{ElecDryer} \times \%_{\frac{\text{dry}}{\text{wash}}} \right) - \\ \frac{CAPY_{ee}}{IMEF_{ee}} \times \left(CW_{ee} + DHW_{ee} \times \%_{ElecDWH} + Dryer_{ee} \times \%_{ElecDryer} \times \%_{\frac{\text{dry}}{\text{wash}}} \right) \end{array} \right)$$

Where *IMEF* is the quotient of the cubic foot capacity of the clothes container, C, divided by the total clothes washer energy consumption per cycle, with such energy consumption expressed as the sum of the machine electrical energy consumption (M), the hot water energy consumption (E), the energy required for removal of the remaining moisture in the wash load (D), and the combined low-power mode energy consumption (L). That is, *IMEF* = C ÷ (M + E + D + L).[23]

And where,

- $CAPY_{base}$ = 4.8 cubic feet = capacity of baseline clothes washer;
- $CAPY_{EE}$ = 4.8 cubic feet = capacity of ENERGY STAR clothes washer;
- $IMEF_{base}$ = 0.84 = assumed IMEF for baseline clothes washer, taken from a 2014 work paper that is available in the archived section of the California Database of Energy Efficiency Resources ("DEER");[24]
- $IMEF_{EE}$ = 2.06 = IMEF for the ENERGY STAR clothes washer;
- $Cycles$ = 182 = the assumed number of clothes washer cycles per year;
- CW_{base} = 0.081 = assumed fraction of baseline clothes washer's total energy consumption that is attributed to mechanical operation;
- CW_{EE} = 0.058 = assumed fraction of ENERGY STAR clothes washer's total energy consumption that is attributed to mechanical operation;
- DWH_{base} = 0.265 = assumed fraction of baseline clothes washer's total energy consumption that is attributed to water heating;
- DWH_{EE} = 0.312 = assumed fraction of ENERGY STAR clothes washer's total energy consumption that is attributed to water heating;
- $\%_{ElecDHW}$ = 0.25 = assumed fraction of water heaters that are electric;
- $Dryer_{base}$ = 0.654 = assumed fraction of baseline clothes washer's total energy consumption that is attributed to the operation of the clothes dryer;

[22] PA TRM, Volume 2: Residential Measures, section 2.4.4, https://www.puc.pa.gov/pcdocs/1692531.docx.

[23] See https://www.energystar.gov/products/clothes_washers/key_product_criteria.

[24] See https://cedars.cpuc.ca.gov/deer-resources/deemed-measure-packages/measure-package-archive/file/1710/download/

$Dryer_{EE}$ = 0.630 = assumed fraction of ENERGY STAR clothes washer's total energy consumption that is attributed to the operation of the clothes dryer;
$\%_{ElecDryer}$ = 0.25 = assumed fraction of clothes dryers that are electric; and
$\%_{Dry/Wash}$ = 0.96 = assumed fraction of dryers that are used every time clothes are washed.

3.2.6 Advanced Power Strips (APS)

The Evaluator utilized the Arkansas TRM version 8.1 ("AR TRM") to evaluate APS savings. The AR TRM determines energy savings for advanced power strips based on its end-use, such as a home entertainment use, computer/home office use, or other undefined uses. The determining factor for energy savings is the appliance or device that is plugged into the 'control' outlet of the advanced power strip: the AR TRM provides stipulated savings values for computers, televisions, or other appliances plugged into the 'control' outlet.

Ex-post verified energy (kWh) savings were calculated based on the percentage of survey respondents that indicated their advanced power strip's primary outlet was occupied by either:

- television or similar home entertainment devices, or
- computer equipment, or
- other.

Survey respondents indicated that 90 percent (45 of 50) of the installed APS were used with televisions or home entertainment devices, two percent (one respondent) were used with a computer system, and eight percent (four respondents) had unspecified usage. For a Tier 2 APS unit such as the TrickleStar TS1810 model distributed by the LI program, the AR TRM specifies savings of 307.4 kWh per year for entertainment centers, 100.9 kWh per year for computer equipment and 204.2 for unspecified usage. The Evaluator calculated a weighted average ex-post savings of 295.01 kWh per year for the APS devices installed by this population of residential customers.

Equation 3-11

Annual savings per installed APS: 90% • 307.4 + 2 % • 100.92 % + 8 % • 204.2 = 295.01 kWh

Survey respondents also indicated that 100 percent (139 of 139) of the APS distributed through the 2025 LI program were installed. Thus, the ISR for this measure was 100 percent.

For NPC, this is 1,046 distributed; for SPPC, this is 376 distributed.[25] Average ex-post kWh savings for APS distributed by the 2025 LI program were 295.01 kWh per year for NPC and SPPC participants.

[25] For APS installations, the whole numbers 1046 (for NPC) and 376 (for SPPC) are used because one can only install a whole APS device; thus, chose not to use fractional counts for the ex-post quantity of APS devices.

3.2.7 ENERGY STAR Dishwasher

This measure is the replacement of an electric dishwasher manufactured before or in 2013 with an ENERGY STAR-qualified electric dishwasher. Following is the energy savings calculation, which is based on the Pennsylvania Technical Reference Manual ("TRM") but is essentially the same as found in other TRMs.[26]

Equation 3-12

$$Annual\ savings\ (kWh) = (kWh_{base} - kWh_{ee}) \times (\%kWh_{OP} + \%kWh_{heat} \times \%Electric_{DHW})$$

Where,

kWh_{base} = annual energy consumption (or energy usage) of baseline dishwasher
kWh_{ee} = annual energy usage of ENERGY STAR-qualified dishwasher
$\%kWh_{OP}$ = 44 percent, i.e., machine-operation fraction of dishwasher energy usage
$\%kWh_{heat}$ = 56 percent, i.e., water heating fraction of dishwasher energy usage
$\%Electric_{DHW}$ = percentage of NVE QAR dishwashers using electrically heated hot water

3.2.8 Weatherization

The weatherization pilot project provided various EEMs for income-eligible senior communities in northern and southern Nevada. The 80 NPC customers who participated in this project received Water Heater Blankets, Water Heater Pipe Wrap, and Air Sealing EEMs. The 96 SPPC customers who participated in this project received Air Sealing EEMs only (i.e., no Water Heater measures). The Air Sealing measures that the LI program provided to participating NPC and SPPC customers included door sweeps, outlet sealing gaskets, and caulking for windows and doors.

The LI program's ex-ante claimed savings assumptions for weatherization EEMs were reasonable, i.e., within a range of industry accepted deemed savings values that the Evaluator found in multiple industry references, including the following:

- "California Municipal Utilities Association Savings Estimation Technical Reference Manual – 2017 Third Edition"[27]
- "California Statewide Deemed Measures eTRM: Technical Reference Manual for California Municipal Utilities Association – 2025 First Edition Version 1.1.0" (April 28, 2025)[28]
- "California Statewide Deemed Measures eTRM: Technical Reference Manual for California Municipal Utilities Association – 2026 First Edition Version 2.0" (December 23, 2025)[29]

[26] See https://www.puc.pa.gov/pcdocs/1692531.docx.

[27] See CMUA TRM 2017, at https://www.cmua.org/resources

[28] See CMUA TRM 2025, at https://www.cmua.org/resources

[29] See CMUA TRM 2026, at https://www.cmua.org/resources

Given that the weatherization pilot project contributed a small percentage (i.e., 2.3 percent for each of the NPC and SPPC service areas) of the LI program's overall ex-ante claimed savings, the Evaluators accepted the ex-ante claimed savings assumptions for the various EEMs that were implemented by this pilot project.

If the weatherization pilot project grows in 2026, the Evaluators will add M&V rigor for these EEMs by conducting M&V onsite inspections and primary data collection in coordination with NV Energy and its implementation contractor.

3.3 Development of Energy Savings Curves

The Evaluator developed a methodology that employs energy savings curves to calculate the portion of annual energy savings that occurs during each hour of the calendar year. An energy savings curve describes the temporal characteristics of energy savings. An energy savings curve may be relatively flat across all hours of the year, or it may be highly variable depending on weather factors. For example, on any given day an ENERGY STAR refrigerator – which operates relatively steadily throughout the calendar year – will achieve energy savings of approximately 1/365 of its verified annual energy savings, whereas an air conditioner will achieve most of its energy savings during the typical cooling season for a given locale. The 2025 LI program did not include weather sensitive EEMs, so the program-level savings are relatively steady across all 12 calendar months.

Seven energy-savings curves were employed in the M&V analyses for the LI program. The origins of these curves are as follows.

1. LED: same energy-savings curve used for many years for residential lighting measures.
2. Refrigerator, Freezer, and Dishwasher: same energy-savings curve used for the 2015 Refrigerator Recycling program, which is essentially a residential appliances curve that is appropriate for all these common appliances.
3. APS: same as the 2011 Consumer Electronics program energy-savings curve.
4. Washer/Dryer: same as HomeFree Nevada's 2011 Clothes Washer energy-savings curve.
5. HVAC, NPC: this is the same energy-savings curve that is used for the NPC residential air conditioning program.
6. HVAC, SPPC: this is the same energy-savings curve that is used for the SPPC residential air conditioning program; this curve was used for the Weatherization pilot project's SPPC version, which implemented true weatherization EEMs (i.e., EEMs that only impacted HVAC energy consumption).
7. Blended Curve for NPC Weatherization: this energy-savings curve is a weighted average of the NPC HVAC for the true weatherization measures and the Washer/Dryer curve for the water heating measures that were also included in the NPC version of the Weatherization pilot project.

3.4 Calculation of First Year Energy (kWh) Savings

First-year kWh savings were calculated by determining the percentage of the year remaining when each EEM was installed. For each EEM, the number of days remaining in the calendar year were used with its normalized energy-savings curve described above to determine what part of annual kWh savings were achieved in the 2025 calendar year. First-year kWh savings were summed by month across each customer rate class in the LI program to determine the first-year kWh savings per month, per rate class. The first-year kWh savings table is provided in Appendix B.

Further information on the Evaluator's methodology for calculating critical peak demand savings can be found in "M&V Technical Appendix 1." M&V topics described in the technical appendix include the Evaluator's calculation methodology for critical peak demand (kW) savings and the Evaluator's determination of monthly energy (kWh) savings per rate class.

3.5 Calculation of Critical Peak Demand Savings

Critical peak demand period per month, as shown in Table 3-5, is the hourly period per month during which NV Energy has historically experienced maximum system-level demand.

Table 3-5. Critical Peak Demand Periods

Month	NPC Peak Hour(s)	SPPC Peak Hour(s)
January	18, 19, or 20	18 or 19
February	19 or 20	19 or 20
March	20	20 or 21
April	20	21
May	17 or 18	21
June	17 or 18	17 or 18
July (potential summer peak and annual peak)	16, 17, or 18	17 or 18
August (potential summer peak and annual peak)	16 or 17	17 or 18
September	17	17 or 18
October	18 or 19	19 or 20
November	18 or 19	18 or 19
December	18 or 19	18 or 19

Critical peak demand (kW) savings are calculated per month, per rate class utilizing ex-post savings determinations and appropriate measure-level 8,760-hour energy savings curves. For each 2025 LI program participant, ex-post annualized energy savings per measure were allocated to the participant's rate class, and to the specific energy savings curve for that measure. The result is a two-dimensional matrix depicting hourly savings, per rate class, for all 8,760 hours of a typical calendar year. The Evaluator then inspected each monthly result to identify maximum average hourly kW savings during each month's designated peak demand period. Summer critical peak

kW savings is defined as the maximum kW reduction expected in a typical calendar year during July or August peak demand hours indicated in Table 3 5, "Critical Peak Demand Periods."

The complete ex-post critical peak demand savings per month, per rate class are provided in Appendix B. For a detailed discussion of the Evaluator's analytical steps for determining critical peak demand (kW) savings, please refer to "M&V Technical Appendix 1."

3.6 Determination of Effective Useful Life

The Evaluator utilized the following sources to determine EUL (years of effective useful life) per measure.

- LED: The Evaluator used a method from the AR TRM to provide a dual baseline that is necessitated by federal and state regulations. Details are provided in section 3.6.1 below.
- Refrigerator/Freezer: The Evaluator's judgement based on the California DEER and other sources.
- APS: AR TRM.
- Washer/Dryer: The Evaluator's judgement based on the DEER and other sources.
- Dishwasher: The Evaluator's judgement based on the DEER and other sources.
- Weatherization Air Sealing: The Evaluator's judgement based on the DEER and other sources. Details are provided in section 3.2.8.
- Weatherization Pipe Wrap (Water Heater): The Evaluator's judgement based on the DEER and other sources. Details are provided in section 3.2.8.
- Weatherization Water Heater Blanket: The Evaluator's judgement based on the DEER and other sources. Details are provided in section 3.2.8.

Measure-level EUL and weighted-average EUL per service area are listed in Table 3-6.

Table 3-6. EUL per Measure Category

Measure	NPC EUL (years)	SPPC EUL (years)
APS	10.00	10.00
Dishwasher	11.00	11.00
LED	8.17	8.17
Refrigerator, Freezer, Washer, and Dryer	14.00	14.00
Weatherization Air Sealing	11.00	11.00
Weatherization Pipe Wrap (Water Heater)	13.00	-
Weatherization Water Heater Blanket	13.00	-
EUL, program-level (weighted average)	**12.39**	**12.47**

3.6.1 Dual Baseline Methodology for LED Lighting

The Evaluator uses a dual-baseline methodology to calculate lifetime savings and EUL for LED lighting. The dual baseline accounts for Nevada Assembly Bill 54 ("AB 54")[30] regulations that are similar to federal Energy Independence and Security Act of 2007 ("EISA")[31] regulations.

The EISA statute included a two-tiered approach to code changes for general service lamps ("GSLs"). EISA 'Tier 1' codes, which started impacting Nevada consumers in 2013, required GSLs to not exceed the maximum Watts shown in the EISA Tier 1 column in Table 3-7 below. EISA 'Tier 2' nominally requires GSL efficacy of 45 lumens per Watt, i.e., the Watts shown in the EISA Tier 2 column in Table 3-7 below.

AB 54 regulations, which took effect on January 1, 2021, require EISA Tier 2 compliance for all GSLs. All LED bulbs distributed by the 2025 LI program are GSLs as defined in AB 54. The remainder of this section provides a detailed description of the dual-baseline methodology for calculating lifetime savings for GSLs.

Table 3-7 shows applicable baseline wattages for GSLs, as required by EISA and AB 54.

Table 3-7. EISA Tier 1 and Tier 2 Baseline Wattages for General Service Lamps

Minimum Lumens	Maximum Lumens	Watts, traditional pre-EISA incandescent bulbs	Tier 1 max Watts (Tier 1 started impacting consumers in 2013)	Tier 2 max Watts
310	749	40	29	12
750	1,049	60	43	20
1,050	1,489	75	53	28
1,490	2,600	100	72	45

The M&V community generally agrees that the LED dual baseline may use Tier 1 savings for two to three years after replacing out-of-code GSLs with EISA Tier 2-compliant GSLs.[32] The Evaluator refers to this LED dual baseline approach as the "AR TRM rationale,"[33] which can be summarized as follows:

> *Given that EISA Tier 1-compliant halogen GSLs typically have lifetimes exceeding three years and given that out-of-code GSLs (including halogen GSLs) remained available to consumers when Tier 2 standards took effect, then the verified available out-of-code GSLs are the appropriate baseline GSL technology for calculating LED energy savings for the first two to three years of LED measure life.*

[30] See regulations promulgated by Nevada Governor's Office of Energy: https://www.leg.state.nv.us/Register/2019Register/R100-19AP.pdf.

[31] See https://www.govinfo.gov/content/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.

[32] In Nevada, an "EISA Tier 2-compliant GSL" is the same as an "AB 54-compliant GSL."

[33] See the original rationale articulated in the AR TRM, Version 8.0 (i.e., the "AR TRM rationale") at https://apps.apsc.arkansas.gov/pdf/10/10-100-R_169_3.pdf; see Chapter 2.5 Lighting.

The Evaluator uses two years of Tier 1 savings, consistent with the Evaluator's M&V methodology and calculations for LED bulbs since the 2020 program year. The Evaluator continues to employ the AR TRM rationale because this 2025 program continued to provide LED GSLs that replaced verified out-of-code GSLs[34] that could reasonably be expected to have two years of remaining useful life. Notably, during 2025 the Evaluator inspected a large sample of old bulbs that the LI program replaced, collected, and saved for M&V inspections: of 302 baseline bulbs the Evaluator inspected, 57.85 percent were old-fashioned incandescent bulbs, 2.11 percent were EISA compliant halogen bulbs, 30.84 percent were CFLs, and 9.20 percent were LEDs.

The 2025 LI program distributed Simply Conserve model 'L09A1927KENC60' and EcoSmart model 'B7A19A60WUL18' LEDs, both of which are 9W GSLs with a nominal EUL of 20 years. Those LED GSLs can be expected to achieve the following lifetime savings:

- Tier 1 savings: 2 years • (41.1 - 9)W • 1,029.3 hr/year / 1000 W/kW = 66.1 kWh [35]
- Tier 2 savings: (20 - 2) yr • (20 - 9)W • 1,029.3 hr/yr / 1000 W/kW = 203.80 kWh [36]
- Lifetime energy savings: 66.1 kWh + 203.80 kWh = 269.9 kWh

A lifetime savings stream derived from a dual baseline does not provide the normal inputs for NV Energy's planning models and forecasting tools (e.g., cost-effectiveness models). Thus, to ensure accurate planning and cost-effectiveness modeling, without requiring extra steps in the use of those NV Energy tools, it is essential to translate the dual baseline into an appropriate single, shortened EUL for planning and cost-effectiveness modeling purposes.

For LED GSLs, the shortened EUL is simply the quotient of its lifetime kWh savings and Tier 1 annual kWh savings.[37] The shortened EUL calculation method is identical to M&V calculations for determining program-level EUL, which is a weighted average of all measure-level EUL across all measures in a program. For the 2025 LI program's LED GSLs, the shortened EUL is simply the quotient of 269.9 kWh lifetime savings and 33.0 kWh (Tier 1) annual savings, or 8.17 years [EUL = 8.17].

[34] The Evaluator verified the out-of-code GSLs that were replaced by LED bulbs.

[35] 41.1 Watts is the weighted average Tier 1 baseline wattage for the 9W LED measure. The baseline calculation is provided in section 3.2.1 in this M&V report, i.e.,

$$Average\ Watts_{baseline} = W_{INC} \bullet \%_{INC} + W_{HAL} \bullet \%_{HAL} + W_{CFL} \bullet \%_{CFL} + W_{LED} \bullet \%_{LED}, \text{ and}$$

$$W_{baseline\ bulb} = 60\ W \bullet 57.8\% + 43\ W \bullet 2.1\% + 15\ W \bullet 30.8\% + 9\ W \bullet 9.2\% = 41.1\ W\ (baseline)$$

[36] Tier 2 baseline wattage for 9W LED GSLs is 20W (see Table 3-7).

[37] Section 3.2.1 above explains the derivation of 33.0 kWh/year, which is the Tier 1 savings per LED GSL.

4 ENERGY IMPACT FINDINGS

This chapter provides a description of the Evaluator's findings for ex-post verified energy and demand impacts for the 2025 LI program, which provided free energy-efficient products and services to 1,775 NV Energy customers (1,298 NPC and 477 SPPC).

4.1 Verification of Measures Installed

The Evaluator verified the 2025 LI program activity and implementation of the reported EEMs. The Evaluator reviewed NV Energy's program tracking data for all EEMs and inspected the ex-ante claimed savings values. Measure installation was verified from program tracking data and from customer responses to participant surveys. The Evaluator verified that the program tracking data for both territories included a small subset of duplicate or erroneous records. Table 4-1 provides a summary listing of ex-ante and ex-post EEM quantities and the resulting ISR per EEM.

Table 4-1. Ex-Post Verified Quantity Installed per EEM

Measure Category	NPC			SPPC			Causes of ISR Findings
	Ex-ante quantity	ISR	Ex-post quantity	Ex-ante quantity	ISR	Ex-post quantity	
APS	1,046	100%	1,046	376	100%	376	NPC and SPPC program tracking data indicated the same quantity of APS that premises received, i.e., ISR for NPC and SPPC is 100%.
Dishwasher	204	100%	204	50	100%	50	NPC and SPPC program tracking data indicated the same quantity of dishwashers that premises received, i.e., ISR for NPC and SPPC is 100%.
Dryer	107	100%	107	89	100%	89	NPC and SPPC program tracking data indicated the same quantity of dryers that premises received, i.e., ISR for NPC and SPPC is 100%.
Freezer	23	100%	23	8	100%	8	NPC and SPPC program tracking data indicated the same quantity of freezers that premises received, i.e., ISR for NPC and SPPC is 100%.
LED Lighting	579	100%	579	181	100%	181	NPC and SPPC program tracking data indicated the same quantity of LEDs that premises received, i.e., ISR for NPC and SPPC is 100%.
Refrigerator	758	100%	758	212	100%	212	NPC and SPPC program tracking data indicated the same quantity of refrigerators that premises received, i.e., ISR for NPC and SPPC is 100%.
Washer	353	100%	353	165	100%	165	NPC and SPPC program tracking data indicated the same quantity of washers that premises received, i.e., ISR for NPC and SPPC is 100%.
Weatherization Air Sealing	80	100%	80	96	100%	96	Survey questions did not track weatherization during the 2025 program year. Based on project information that the LI program shared with the Evaluators, we stipulated an ISR of 100% for all Weatherization EEMs claimed by the 2025 LI program.
Weatherization Pipe Wrap (Water Heater)	80	100%	80	-	-	-	
Weatherization Water Heater Blanket	80	100%	80	-	-	-	
All EEMs	**3,310**	**100%**	**3,310**	**1,177**	**100%**	**1,177**	

For the M&V analyses for the LI program, the statistical requirement is sampling precision of ±10.0 percent at the 90 percent confidence level. A census of participants was invited to complete program surveys. Completed surveys were provided by 57.80 percent of participants (1,026 of 1,775), which equates to ex-post sampling precision of ±2.57 percent at the 90 percent confidence level.

4.2 Energy Impacts and Variances

The Evaluator employed engineering analyses to determine annual energy (kWh) and demand (kW) savings. Ex-post verified savings for all EEMs were determined according to the algorithms described in the M&V methodology chapter in this report.

The following tables provide service territory (NPC vs. SPPC) summaries of key metrics, including the count of customers served, the quantity of EEMs distributed, ex-ante estimated energy (kWh) savings, and the Evaluator's findings for ex-post verified energy (kWh) savings, lifetime savings, and critical peak demand savings.

NPC results for the 2025 LI program:

Ex-post verified savings are 565,395 kWh annually, lifetime savings are 7,007,778 kWh, and the program will provide summer critical peak demand savings of 80.1 kW. Table 4-2 depicts key outcomes for the 2025 NPC LI program.

SPPC results for the 2025 LI program:

Ex-post verified savings are 199,889 kWh annually, lifetime savings are 2,491,835 kWh, and the LI program will provide summer critical peak demand savings of 29.5 kW. Table 4-3 depicts key outcomes for the 2025 SPPC LI program.

Table 4-2. Summary of Energy Impacts, NPC

Measure Category	Customers Served by EEM[38]	EEMs Received by Customers	Annual Energy Savings (kWh)			Average Savings (kWh) per Customer[39]	Average Savings (kWh) per EEM	Effective Useful Life (years)	Lifetime Energy Savings (kWH)
			Ex-Ante	Ex-Post	Realization Rate				
APS	1,023	1,046	223,123	186,971	83.8%	182.7673	178.7485	10.00	1,869,710
Dishwasher	204	204	13,056	8,792	67.3%	43.1000	43.1000	11.00	96,716
Dryer	107	107	36,250	41,770	115.2%	390.3700	390.3700	14.00	584,774
Freezer	23	23	2,783	2,503	89.9%	108.8261	108.8261	14.00	35,042
LED Lighting	133	579	17,949	19,130	106.6%	143.8358	33.0400	8.17	156,293
Refrigerator	756	758	242,560	223,422	92.1%	295.5317	294.7520	14.00	3,127,908
Washer	353	353	68,835	68,687	99.8%	194.5800	194.5800	14.00	961,614
Weatherization Air Sealing	80	80	3,920	3,920	100.0%	49.0000	49.0000	11.00	43,120
Weatherization Pipe Wrap (Water Heater)	80	80	3,720	3,720	100.0%	46.5000	46.5000	13.00	48,360
Weatherization Water Heater Blanket	80	80	6,480	6,480	100.0%	81.0000	81.0000	13.00	84,240
All EEMs	**2,839**	**3,310**	**618,676**	**565,395**	**91.4%**	**435.5893**	**170.8142**	**12.39**	**7,007,778**

Table 4-3. Summary of Energy Impacts, SPPC

Measure Category	Customers Served by EEM[40]	EEMs Received by Customers	Annual Energy Savings (kWh)			Average Savings (kWh) per Customer[41]	Average Savings (kWh) per EEM	Effective Useful Life (years)	Lifetime Energy Savings (kWH)
			Ex-Ante	Ex-Post	Realization Rate				
APS	368	376	77,733	62,792	80.8%	170.6304	167.0000	10.00	627,920
Dishwasher	50	50	3,200	2,155	67.3%	43.1000	43.1000	11.00	23,705
Dryer	89	89	28,800	32,817	113.9%	368.7300	368.7300	14.00	459,438
Freezer	8	8	968	793	81.9%	99.1250	99.1250	14.00	11,102
LED Lighting	46	181	5,611	5,980	106.6%	130.0052	33.0400	8.17	48,859
Refrigerator	212	212	67,840	58,542	86.3%	276.1415	276.1415	14.00	819,588
Washer	165	165	32,175	32,106	99.8%	194.5800	194.5800	14.00	449,480
Weatherization Air Sealing	96	96	4,704	4,704	100.0%	49.0000	49.0000	11.00	51,744
All EEMs	**1,034**	**1,177**	**221,031**	**199,889**	**90.4%**	**419.0543**	**169.8292**	**12.47**	**2,491,835**

[38] "Customers served by EEM" indicates the number of customers who received the individual measure, for example, a washer. Customers may receive more than one measure. The total 2,839 is the sum of customers in all categories and is not unique. The total of unique NPC customers is 1,298.

[39] Average savings per customer (i.e., 435.5893 kWh) is the quotient of 565,395 kWh and 1,298 participating homes.

[40] "Customers served by EEM" indicates the number of customers who received the individual measure, for example, a washer. Customers may receive more than one measure. The total 1,034 is the sum of customers in all categories and is not unique. The total of unique SPPC customers is 477.

[41] Average savings per customer (i.e., 419.0543 kWh) is the quotient of 199,889 kWh and 477 participating homes.

First-year results for NPC and SPPC:

First-year savings, i.e., savings that occurred during the 2025 calendar year, were 252,569 kWh for the NPC LI program and 86,821 kWh for the SPPC LI program.

Realization rates and variances for NPC and SPPC:

The program-level realization rate ("RR"), which is the quotient of ex-post verified kWh savings and ex-ante claimed kWh savings, is 91.4 percent for NPC and 90.4 percent for SPPC. Main causes of RR variances from 100 percent include the following M&V findings.

- APS: The APS RRs for NPC, 83.8 percent, and SPPC, 80.8 percent, are significantly lower than 100 percent. Program data contained "TrickleStar" Tier 2 APS measures for which the Program assigned ex-ante claimed kWh of 234kWh and "Smart Strip" Tier 1 APS measures for which the Program assigned ex-ante claimed kWh of 167 kWh. There were also "Smart Strip" Tier 1 APS measures for which the Program assigned ex-ante claimed kWh savings as if the Tier 1 APS were Tier 2 APS, i.e., 234 kWh was claimed. The Evaluator has applied 167 kWh in these instances.[42] This led to the lower ex-post verified savings, which resulted in the suboptimal realization rate.
- Dishwasher: The RR is 67.3 percent for both NPC and SPPC due to customer survey data that indicated that 36.2 percent of the customers who received dishwashers have electric water heaters, while the remainder of the dishwasher recipients have gas water heaters. The ex-ante claimed savings had assumed electric water heaters for all dishwasher recipients.
- Dryer: RR is 115.2 percent for NPC and 113.9 percent for SPPC mainly due to the impact of heat pump dryers, for which the Evaluators found ex-post verified energy savings greater than the Program's ex-ante claimed energy savings.
- Freezer: RR ranges from 89.9 percent (NPC) to 81.9 percent (SPPC). All replaced freezers had the same model number in the Program tracking data; thus, the Evaluator a) assumed that the model number is invalid and not usable for this analysis, and b) conservatively imputed vintages for the population of replaced freezers. LEDs: RR is 106.6 percent for both NPC and SPPC. The Evaluators determined that the average wattage of actual baseline bulbs (old bulbs that were replaced) was 41.1 Watts due to the significant subset of the 2025 Program's replaced bulbs that were old fashioned Edison incandescent bulbs. The verified baseline wattage of 41.1 Watts, which exceeded the expected baseline wattage, caused the greater than 100 percent RR.
- Refrigerator: The Program reported that the replaced refrigerators' vintages, i.e., year of manufacture, averaged 2007. If that average vintage of 2007 were accurate, the RR would have been less than 60 percent. However, the Evaluators determined the verified average vintage of 2002, resulting in a RR of 92.1 percent for NPC and 86.3 percent for SPPC.

[42] It was known in early 2025 that the Program was phasing out the TrickleStar Tier 2 APS as soon as the remaining inventory from 2024 was depleted.

- Washer: The ex-ante claimed savings assumptions were reasonable and matched the Evaluator's ex-post verified savings calculations, hence the RR of 100 percent.
- Weatherization: The ex-ante claimed savings assumptions were reasonable, which the Evaluator verified by checking multiple California based TRMs as discussed in section 3.2.8 above, hence the RR of 100 percent.

4.3 Energy Savings Impacts by Rate Class

Table 4-4 and Table 4-5 depict the 2025 LI program savings per rate class for each service territory.

Table 4-4. NPC Savings by Rate Class

Rate Class	First-year (2025) Savings (kWh)	Annual Energy Savings (kWh)	Percent of Energy Savings per Territory
RM and RS	252,568.79	565,395.00	100.00%
Total	**252,568.79**	**565,395.00**	**100.00%**

Table 4-5. SPPC Savings by Rate Class

Rate Class	First-year (2025) Savings (kWh)	Annual Energy Savings (kWh)	Percent of Energy Savings per Territory
D1 and DM1	86,821.35	199,889.00	100.00%
Total	**86,821.35**	**199,889.00**	**100.00%**

Appendix B provides monthly ex-post verified savings results for calendar years 2025 and 2026.

4.4 Ex-Post Verified Critical Peak Demand Savings

Ex-post verified summer critical peak demand (kW) savings:

- 80.1 kW for NPC
- 29.5 kW for SPPC

Ex-post critical peak demand (kW) savings per month and rate class are provided in Appendix B. Further information on the Evaluator's methodology for calculating critical peak demand savings can be found in "M&V Technical Appendix 1."

4.5 M&V Inputs for Cost-Effectiveness Model

The following tables provide M&V results needed to support NV Energy's cost-effectiveness model for the 2025 LI program.

Table 4-6. M&V Inputs for Cost-Effectiveness Model, NPC

EEM	Number of Units Installed	Total Annual Savings (kWh/Year)	Annual Savings (per installed unit) (kWh)	EUL (years)
APS	1046	186,971	178.7	10.00
Dishwasher	204	8,792	43.1	11.00
Dryer	107	41,770	390.4	14.00
Freezer	23	2,503	108.8	14.00
LED Lighting	579	19,130	33.0	8.17
Refrigerator	758	223,422	294.8	14.00
Washer	353	68,687	194.6	14.00
Weatherization Air Sealing	80	3,920	49.0	11.00
Weatherization Pipe Wrap (Water Heater)	80	3,720	46.5	13.00
Weatherization Water Heater Blanket	80	6,480	81.0	13.00
TOTALS	**3,310**	**565,395**	**170.8**	**12.39**

Table 4-7. M&V Inputs for Cost-Effectiveness Model, SPPC

EEM	Number of Units Installed	Total Annual Savings (kWh/Year)	Annual Savings (per installed unit) (kWh)	EUL (years)
APS	376	62,792	167.0	10.00
Dishwasher	50	2,155	43.1	11.00
Dryer	89	32,817	368.7	14.00
Freezer	8	793	99.1	14.00
LED Lighting	181	5,980	33.0	8.17
Refrigerator	212	58,542	276.1	14.00
Washer	165	32,106	194.6	14.00
Weatherization Air Sealing	96	4,704	49.0	11.00
TOTALS	**1,177**	**199,889**	**169.8**	**12.47**

5 RECOMMENDATIONS

Based on findings discussed in this M&V report, the Evaluator provides the following recommendations to mitigate future evaluation risk by reducing uncertainties associated with future ex-ante savings assumptions, estimates, and calculations.

- For refrigerators: In program year 2025, online sign up required qualifying refrigerators to be manufactured before or in 2013. To help maintain a reasonable average per-unit savings in future years, the LI program must maintain this age requirement for qualified refrigerators. The rationale for this recommendation is that the federal minimum efficiency standard for refrigerators was increased for all refrigerators manufactured in 2014 and after. Thus, the LI program and NV Energy's customers would achieve significantly less energy savings per refrigerator (compared to the savings described in this M&V report) if replacing refrigerators manufactured in 2014 or after. The ex-ante estimated savings also needs to be reduced to mitigate risk of low RR; as stated in section 4.2 above, "(if the) average vintage of 2007 were accurate, the RR would have been less than 60 percent..."
- The LI program should continue exploring opportunities to target households with two or more occupants, as higher occupancy correlates with higher average savings per household. U.S. census data indicates that Nevada households have an average of 2.6 occupants, whereas the 2025 LI program's survey respondents reported an average of 1.9 occupants.
- The LI program's execution of satisfaction and M&V surveys improved in 2025 – 58 percent of participants completed surveys – as compared to 12.9 percent in 2024. While recognizing the overall improvement in this area of activity in recent years, the M&V team encourages an ongoing effort to continue to increase the response rates for program surveys. It is reasonable to expect that every recipient of valuable, free goods and services should accommodate requests for feedback through the satisfaction and M&V surveys.
- The LI program's ex-ante data quality was satisfactory overall in 2025 but could improve. Section 4.1 in this M&V report provides a detailed description of program tracking data duplicates and errors. The M&V team encourages an ongoing emphasis and priority regarding data quality. Specifically, the program should implement a monthly data quality assurance procedure to check program tracking data for duplicates and errors, e.g., sort all program records by premise or street address to identify duplicate records, errors, or other anomalies such as incorrect or omitted model numbers.
- For weatherization: Going forward in 2026, the LI program implementer should provide calculations and/or precise references for ex-ante claimed savings. The LI program should also implement customer satisfaction surveys to collect and track customer feedback. If the weatherization pilot project grows in 2026, the Evaluators will add M&V rigor for these EEMs by conducting M&V onsite inspections and primary data collection in coordination with NV Energy and its implementation contractor.

6 APPENDIX A: SURVEY FORM

This appendix provides a listing of the survey questions employed by the 2025 LI program.

NV Energy

QAR 2025 Participant Survey

Contact Information

1. Name
2. Email address

APPLICATION & INSTALLATION

1. Was it easy for you to apply for the Qualified Appliance Replacement offer?

   A. Yes
   B. No

   [IF NO]
   Please explain.

2. Which products did you order? (check all that apply)

   A. Refrigerator
   B. Freezer
   C. Clothes Washer
   D. Clothes Dryer
   E. Advanced Power Strip
   F. LED Light Bulbs

3. Did you receive all the products that you ordered?

   A. Yes
   B. No

   [IF NO]
   Which item(s) were not received? (check all that apply)

   A. Refrigerator
   B. Freezer
   C. Clothes Washer
   D. Clothes Dryer
   E. Advanced Power Strip
   F. LED Light Bulbs

4. Did all products arrive in good condition?

    A. Yes
    B. No

    [IF NO]
    Please explain.

5. How satisfied were you with the scheduling and delivery of the products?

    A. Very satisfied
    B. Satisfied
    C. Neutral
    D. Dissatisfied
    E. Very dissatisfied

    [IF DISSATISFIED OR VERY DISSATISFIED]
    Why were you dissatisfied?

6. How satisfied were you with the installation of your appliances?
    (dropdown, very satisfied/satisfied/neutral/dissatisfied/very dissatisfied)

    A. Very satisfied
    B. Satisfied
    C. Neutral
    D. Dissatisfied
    E. Very dissatisfied

    [IF DISSATISFIED OR VERY DISSATISFIED]
    Why were you dissatisfied?

7. (If ordered LED) Were you able to successfully install the LED Light bulbs?

    A. Yes, all
    B. Yes, Some
    C. No

    [IF YES OR SOME]
    How many LED Light bulbs did you install? (open ended)
    What kind of bulbs did the LED bulbs replace? (check all that apply)
    A. Old fashioned bulbs such as 60W incandescent bulbs
    B. Newer bulbs such as 43W halogen bulbs
    C. Compact fluorescent or spiral-shaped bulbs
    D. Don’t know.

8. (If ordered APS) Were you able to successfully install the Advanced Power Strip?

    A. Yes
    B. No
    C. Don't know.

    [IF YES OR DON'T KNOW]
    What devices do you have plugged into the Advanced Power Strip? (Check all that apply)

    A. TV
    B. Game Console
    C. Computer
    D. Monitor
    E. Stereo
    F. Media Player (DVD, VCR)
    G. Lighting
    H. Other (Open Ended)

9. How satisfied are you with the quality of the products?

    A. Very satisfied
    B. Satisfied
    C. Neutral
    D. Dissatisfied
    E. Very dissatisfied

    [IF DISSATISFIED OR VERY DISSATISFIED]
    Why were you dissatisfied?

10. How would you rate your overall experience with PowerShift by NV Energy?

    A. Very satisfied
    B. Satisfied
    C. Neutral
    D. Dissatisfied
    E. Very dissatisfied

    [IF DISSATISFIED OR VERY DISSATISFIED]
    Why were you dissatisfied?

11. Are there any other comments you'd like to share about your experience?

    [OPEN ENDED, NOT REQUIRED]

12. If you'd like to be contacted about your experience, enter your phone number below.

    [OPEN ENDED, NOT REQUIRED]

DEMOGRAPHICS

13. Which of the following best describes your home?

    A. Manufactured or mobile home
    B. Single-family home
    C. Duplex or townhouse
    D. Apartment or condominium
    E. Other (Specify)
    F. Don’t know.

14. When was your home built?

    A. Before 1960
    B. 1960-1979
    C. 1980-1999
    D. 2000-2009
    E. 2010 or later
    F. Don't know.

15. How large is your home?

    A. Less than 1,000 square feet
    B. 1,000-2,000 square feet
    C. 2,000-3,000 square feet
    D. 3,000-4,000 square feet
    E. Greater than 4,000 square feet
    F. Don't know.

16. What is the main fuel used to heat your home?

    A. Electricity
    B. Natural gas
    C. Propane
    D. Oil
    E. Other (Please specify)
    F. Don’t heat home.
    G. Don’t know.

17. What fuel does your main water heater use?

    A. Electricity
    B. Natural Gas
    C. Propane
    D. Other (Please specify)
    E. Don’t know.

18. How old are you?

    A. 18-24
    B. 25-34
    C. 35-44
    D. 45-54
    E. 55-64
    F. 65 or older
    G. Prefer not to answer

19. Including yourself, how many people are living in your household?
    [DROP DOWN BOX: 1-12+]

20. The last series of questions related to household income thresholds that correspond to the number of occupants.

7 APPENDIX B: SAVINGS PER MONTH BY RATE CLASS

This appendix provides monthly energy (kWh) savings by rate class for the years 2025-2026 and peak demand (kW) savings per month.

Table 7-1. First-Year (i.e., Calendar Year 2025) Energy Savings (kWh) per Month by Rate Class, NPC

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RM and RS	3,352	5,692	8,744	10,619	13,733	16,139	20,960	25,830	30,377	35,512	36,806	44,803	252,569
Total	**3,352**	**5,692**	**8,744**	**10,619**	**13,733**	**16,139**	**20,960**	**25,830**	**30,377**	**35,512**	**36,806**	**44,803**	**252,569**

Table 7-2. Calendar Year 2026 (Full Year): Energy Savings (kWh) per Month by Rate Class, NPC

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RM and RS	48,559	43,847	45,999	45,141	50,178	47,638	50,436	49,851	47,247	45,207	42,841	48,451	565,395
Total	**48,559**	**43,847**	**45,999**	**45,141**	**50,178**	**47,638**	**50,436**	**49,851**	**47,247**	**45,207**	**42,841**	**48,451**	**565,395**

Table 7-3. Critical Peak Demand Savings (kW) per Month by Rate Class, NPC (Calendar Year 2026)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RM and RS	97.3	97.3	91.3	97.5	86.6	79.2	**80.1**	77.7	77.1	83.5	80.0	89.5
Total	97.3	97.3	91.3	97.5	86.6	79.2	**80.1**	77.7	77.1	83.5	80.0	89.5

Table 7-4. First-Year (i.e., Calendar Year 2025) Energy Savings (kWh) per Month by Rate Class, SPPC

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1 and DM1	1,183	2,072	3,275	3,916	4,819	5,509	7,249	8,777	9,534	11,070	12,378	17,040	86,821
Total	**1,183**	**2,072**	**3,275**	**3,916**	**4,819**	**5,509**	**7,249**	**8,777**	**9,534**	**11,070**	**12,378**	**17,040**	**86,821**

Table 7-5. Calendar Year 2026 (Full Year): Energy Savings (kWh) per Month by Rate Class, SPPC

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D1 and DM1	17,306	15,570	16,298	15,851	17,382	16,631	18,216	17,742	16,576	15,800	15,213	17,304	199,889
Total	**17,306**	**15,570**	**16,298**	**15,851**	**17,382**	**16,631**	**18,216**	**17,742**	**16,576**	**15,800**	**15,213**	**17,304**	**199,889**

Table 7-6. Critical Peak Demand Savings (kW) per Month by Rate Class, SPPC (Calendar Year 2026)

Rate Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
D1 and DM1	32.1	34.6	33.6	37.3	36.3	29.1	**29.5**	29.3	28.3	31.4	28.5	31.9
Total	32.1	34.6	33.6	37.3	36.3	29.1	**29.5**	29.3	28.3	31.4	28.5	31.9