



Evaluation, Measurement, and Verification Report for Virginia Electric and Power Company (Dominion Energy)

CASE NO. PUR-2021-00247 (VIRGINIA)
DOCKET NO. E-22, SUB 645 (NORTH CAROLINA)

PUBLIC VERSION
VOLUME 6 of 6

June 15, 2023
Prepared by DNV Energy Insights USA Inc. (DNV)





Appendix N

Smart Thermostat Rewards Program Impact Evaluation

Dominion Energy

Date: April 28, 2023





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1 EXECUTIVE SUMMARY

This is the second impact analysis of the Residential Smart Thermostat Rewards demand response program, which operated demand response events (events) for the first time in 2021. This report summarizes program participation in and impacts from the 2022 events. From May through August 2022, Dominion Energy called 25 events.

The Smart Rewards Program leverages the demand response functionality of smart thermostats to provide residential load curtailment during periods of high demand on the Dominion grid. The smart thermostat functionality offers a pre-event cooling period that varies with the thermostat manufacturer. Following a pre-event cooling period, thermostat setpoints are increased from the cooler temperature achieved during pre-cooling to a higher event-period setpoint, which varies by customer and thermostat manufacturer.

Once the new setpoint is achieved, cooling re-commences, but the air conditioner draws less power due to the higher setpoint. In addition to the pre-cooling functionality, smart thermostats allow the customer to override the event at the thermostat by simply changing the existing set point at any time during the event. While this functionality is an important customer selling point for smart thermostat demand response programs, it also has the potential to lower demand response impacts.

In 2022, the evaluated load impact for weather conditions observed during Dominion Energy's peak day conditions was 0.94 KW per participant.

1.1 Key findings

- In 2022, the evaluated load impact was 0.94 KW per participant at Dominion's summer peak planning which is the 2nd year the Smart Thermostat Rewards program produced levels of residential demand response potential not seen since the very early years of the AC Cycling program.
- By the first event on May 20th, 2022, 7,387 customers were enrolled in the program, almost twice that of 2021. The program continued to experience strong growth and over the summer grew 18% to 8,742 participants.
- Average event-level ex post impacts range from 0.55 to 1.01 KW
- First-hour load reduction is consistently higher than subsequent hours, with load reduction dropping with each additional hour. This pattern is present in all events and is explained by the natural dynamic of a setpoint change and the ease of override. This is combined with an increase in load in the hour prior to the event due to pre-cooling. Strategically leveraging this pattern to address system load reduction while avoiding untimely increases—through, for example, staggered starting hours—has the potential to increase the adaptability of the program impacts.



2 INTRODUCTION

The smart thermostat is a measure in three Dominion Programs: the Smart Thermostat Purchase Program, the WeatherSmart Program, and the Smart Thermostat Rewards Program.¹ The Smart Thermostat Purchase Program provides rebates for the purchase of qualifying smart thermostats. In the WeatherSmart Program, customers are incentivized to allow remote optimization of their smart thermostat temperature setpoints and runtimes and provided a monthly report with personalized energy saving tips. The Smart Thermostat Rewards Program provides incentives for participating in demand response (DR) events that use the functionality of smart thermostats. The Smart Thermostat Rewards Program began recruiting participants in March 2021.

This report summarizes participation in the 2022 Smart Rewards program DR events and the 2022 ex post and ex ante impact analyses. It also presents event-hour and event-day results, sample plots showing the hourly progression of two events, and the weighting strategy that extrapolates impacts from AMI participants to the full population.

2.1 Smart thermostats

Smart thermostats are energy management tools that enable customers to regulate their HVAC energy consumption. Since these are programmable devices, customers can schedule the set points of their homes' cooling and heating systems, so they run during periods when customers need them. These devices can also sense occupancy and "learn" to optimize temperature settings of the home to further reduce energy consumption. Because they are Wi-Fi-enabled, they allow customers to adjust settings from their smart devices for additional energy use control. Smart Thermostat Rewards leverages the functionality of smart thermostats to provide residential load curtailment like the recently closed Residential AC Cycling Program.

Demand Response Strategy

Pre-event cooling

All the participating thermostat types implement some form of pre-cooling to reduce the internal temperature of the house in preparation for the upcoming DR event. This pre-cooling period varies in length and the number of degrees below the customer's pre-set temperature setpoint.

Event strategy

At the beginning of an event, the increased setpoint effectively turns off the air conditioner as the household temperature rises from the cooler temperature achieved during pre-cooling to the higher event-period setpoint. This temperature change can be as much as 5 degrees and can avoid air conditioner load at the house for as long as 2 hours depending on household characteristics (insulation, shading, etc.). Once the new setpoint is achieved, cooling action re-commences, but the air conditioner draws less power during the event period due to the higher than normal setpoint. In addition to the pre-cooling functionality, smart thermostats allow the customer to override the event at the thermostat by simply changing the existing set point at any time during the event. While this functionality is an important customer selling point for smart thermostat DR programs, it also lowers DR impacts to the extent customers override the event-controlled setpoint.

Smart Thermostats Rewards versus AC Cycling

Although it closed after the 2022 event season, Dominion operated the Residential AC Cycling Program for 12 years.² As opposed to the pre-cooling event strategy of smart thermostats described above, the AC Cycling and Smart Thermostat

¹ Participants in the WeatherSmart Program allow the Company to make minor, short-term adjustments to the customer HVAC system via the smart thermostat.

² The AC Cycling officially closed on December 31, 2022.



Rewards programs share a common objective. AC Cycling reduced demand by using a 50% adaptive cycling strategy with no pre-cooling. The 50% adaptive cycling strategy produces a different event-based indoor temperature response than the smart thermostat pre-cooling strategy and has a different load reduction pattern. Two Smart Thermostats Rewards events occurred before the start of the AC Cycling season, but in June, July, and August, the Smart Thermostat Rewards Program operated on the same event schedule as AC Cycling. Accordingly, DNV used the same analysis approach to calculate impacts for both programs, while accounting for differences in the two reduction strategies and technologies available from the smart thermostats. The improved control features embedded in smart thermostats, the ability to implement more sophisticated operational strategy, and an improved customer interface has resulted in a doubling of KW impacts of Smart Rewards relative to AC Cycling.



3 SMART THERMOSTAT REWARDS EVENTS AND CUSTOMER PARTICIPATION

3.1 Frequency

In 2022, there were 25 events spanning 73 event-hours. There were 2 events in May, 6 in June, 10 in July, and 7 in August. Dominion Energy called 2 two-hour events and 23 three-hour events during 2022. No four-hour events were called during the 2022 event season. The distribution of event length in 2022 differed somewhat from 2021, which contained 8 two-hour events, 13 three-hour events, and 4 four-hour events. The difference in load reduction as a function of consecutive event hours is discussed in Section 5.1.

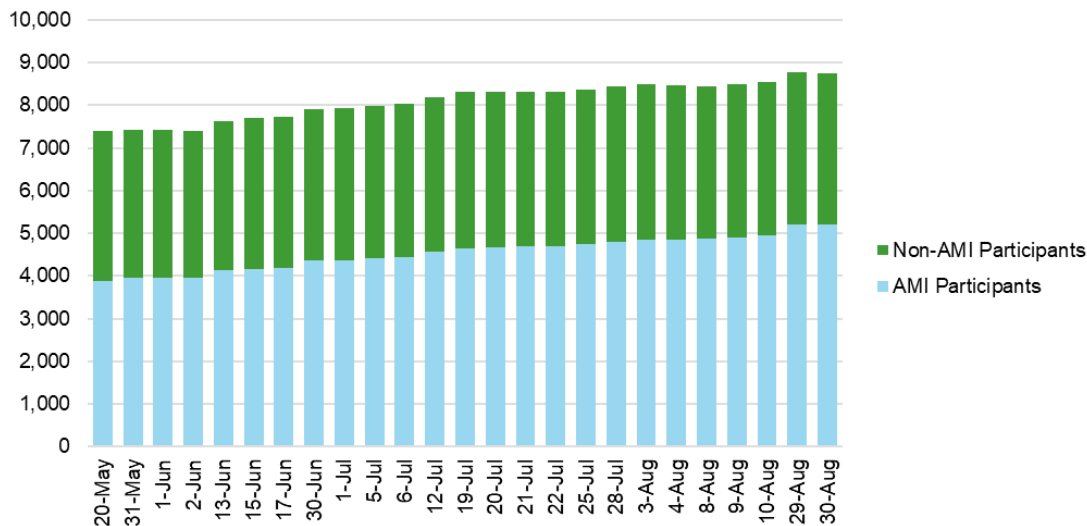
3.2 Participation

Program enrollment began in March 2021. 7,387 customers were enrolled in the program during the first event on May 20, 2022. This is 1.75 times the number that were enrolled in the last event of 2021. The program continued to experience strong growth and over the summer grew another 18% to 8,742 participants.

Program impacts will reflect the mix of participants active on a given event day. This could lead to change in load reduction estimates over time as the population changes. As the program grows, typical load reduction could increase; for example, if a higher proportion of participants are in high cooling load areas. More likely, the characteristics of participants will not change dramatically over time and any trends in load reduction estimates will be obscured by natural variation across events caused by weather and short-term customer behavior such as vacations.

The increase in participants over the event season and the proportion of participants with available AMI data are shown in Figure 3-1. The role of AMI data in the analysis is described in Section 4.1, AMI data, and Section 4.2, Methodology.

Figure 3-1. AMI and non-AMI participants by event





4 IMPACT ANALYSIS

4.1 Smart Thermostat Rewards evaluation data

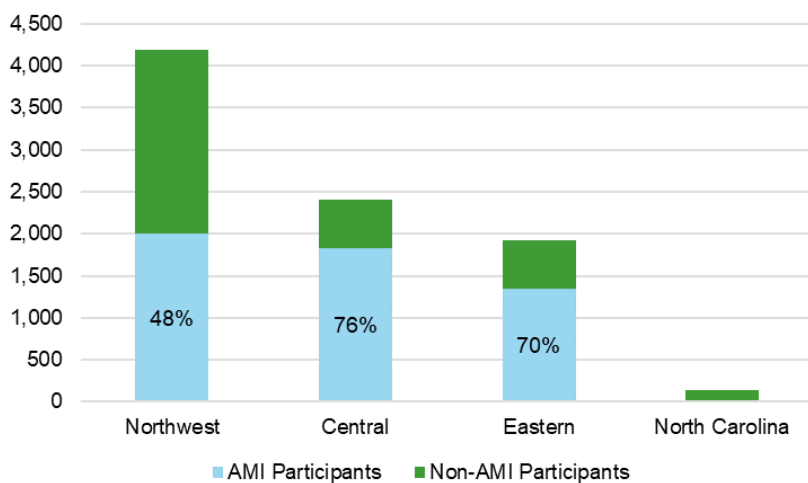
Four data sources were used in the impact analysis: AMI whole-house energy consumption data, thermostat event control data, Smart Thermostat Rewards tracking data, and weather data. Each is described below. Descriptions and results of the data cleaning procedures are provided in APPENDIX A.

AMI data

The analysis takes advantage of half-hourly whole-house consumption data collected from the AMI meters of all participating AMI-enabled customers.

The distribution of AMI enabled customers across the Northwest, Central, and Eastern divisions, and in North Carolina is shown in Figure 4-1. Roughly 60% of participants have AMI data. This is a dramatic increase from 2021 when the average coverage of AMI data across all divisions was 32%. AMI data coverage is important as it forms the basis of the impact estimates. AMI-based impact estimates are extrapolated to the division based on both weights developed from these participant counts as well as population-level knowledge of customer cooling consumption. This process is discussed further in Section 4.2. The sample weights and weighting methodology are included in APPENDIX B.

Figure 4-1. AMI and non-AMI participants by division (August 30, 2022)



Thermostat event data

Thermostat event data is the record of controlled participants for each event and is provided by the implementer. Event data also includes a record of customers that opted out of a given event.

Program tracking data

Program tracking data collected by the implementers and delivered by Dominion is used to link the participant to their respective AMI consumption data and division to identify the participant's location (which is used to assign the appropriate weather station), and to confirm that thermostat control records match the Company's list of active participants.



Weather data

Hourly temperature and humidity data from NOAA is collected at the weather station associated with the Dominion office nearest to the household’s service address.³ Data from 10 weather stations were used in the analysis. These stations are included in Table 4-1.

Table 4-1. Weather Stations used in the analysis

Charlottesville-Albemarle Airport, Virginia
Elizabeth City Regional Airport, North Carolina
Farmville Regional Airport, Virginia
Norfolk International Airport, Virginia
Richmond International Airport, Virginia
Roanoke Regional Airport, Virginia
Rocky Mount-Wilson Regional Airport, North Carolina
Ronald Reagan Washington National Airport, Virginia
Shannon Airport, Virginia
Washington Dulles International Airport, Virginia

4.2 Methodology

The following steps are used to calculate demand reduction impacts for the program:

1. For each account, we determine the optimal degree day base THI (temperature-humidity index) for each account by modelling hourly consumption as a function of degree days and hourly dummy variables across a range of possible degree day bases.⁴ We take the degree day base for each account that generates the highest R² and use this THI to calculate degree days. Then, we model hourly consumption as a function of hourly dummy variables, the degree days based on the optimal reference temperature, and interaction terms for each hour and degree day. The estimated parameters from this regression analysis are used to predict a preliminary estimate of baseline consumption on event days for each AMI-enabled account. The regressions used to determine the optimal degree day base and predicted baseline consumption are specified in APPENDIX D.
2. Load reduction is calculated as the difference between the adjusted baseline consumption and actual consumption for each event hour for all AMI accounts. Because regressions that are estimated on less extreme non-event days tend to underestimate load on more extreme event days, a widely used pre-event adjustment is applied to estimated load at the customer/event level. The difference between actual consumption and the predicted baseline consumption during the third hourly interval prior to an event is added to the two-hour pre-event period and the event period. This adjusts the predicted baseline upward or downward to account for underestimation or overestimation of consumption on the afternoon of an event day. The difference during the third hour interval prior to an event was selected because it occurs prior to pre-cooling. If the adjustment were calculated using intervals during pre-cooling, load would be adjusted above the level that would have occurred in the absence of the program.
3. The AMI sample used for this analysis is large but not selected at random. The geographic build-out of the AMI system determines which customers have AMI meters and available hourly data. The sample is stratified at the division level to make sure each region gets proper representation regardless of number of AMI meters in a given division. As with the aggregation of any stratified sample, weights are required to reflect the presence of the population in the sample.

³ National Oceanic and Atmospheric Association (NOAA), National Centers for Environmental Information, [Climate Data Online](https://climate.data.noaa.gov/). Dominion Energy’s peak planning condition is hour-ending 17 at 95°F at 43% RH, or 83.4 THI.

⁴ Temperature Humidity Index = THI = Td – (0.55 – 0.55*RH) * (Td – 58) where Td is dry bulb temperature and RH is relative humidity. Source: PJM Glossary: <http://www.pjm.com/Glossary.aspx>



Sample weights are calculated for each event by dividing the number of participants in the event logs by the number of participants with AMI consumption data for each division and event date. APPENDIX B contains a description of the weighting method and final weights.

4. Ex post impacts describe what happened during an event-hour and over each event. The load reduction for each AMI account is extrapolated to the full program population using the sample weights described above and a ratio estimation method that leverages the 2021 cooling consumption available for the full population of customers. Incorporating 2021 cooling consumption into the estimation method addresses possible differences in cooling system size between the sample and the population and decreases the standard errors of the load reduction estimate. The results are the calculated ex post impact for all event hours. The results of the ex post analysis are provided in Section 5.1 and APPENDIX C.
5. The ex post estimates are then incorporated in a linear regression model for each event hour to produce the ex ante impacts that are used to estimate the program impacts at the Company's peak planning conditions. The ex ante results are provided in Section 5.3. Ex post estimates are modelled using weighted actual THI and when feasible, a dummy variable for the event interval and an interaction term between weighted actual THI and the event interval dummy variable because the hourly ex post estimates are impacted by the event start time and weather conditions. The HE (hour-ending) 17 ex ante model contains a dummy variable equal to 1 if HE 17 was the first interval during the event and 0 if HE 17 was the second or third interval, and an interaction term where this dummy variable is multiplied by the actual weighted THI. Including the dummy variable and the interaction term allows for the intercept and the slope of the ex ante line to differ between HE 17 intervals that are the first interval of the event and those that are the second or third interval of the event. The HE 18 ex ante model contains weighted actual THI, a dummy variable if HE 18 is the second hour of the event, and an interaction term multiplying this dummy variable by the weighted actual THI. Event interval dummy variables and interaction terms were not included in the HE 16 or HE 19 ex ante models because all but two HE 16 intervals were the first interval of the event and all HE 19 intervals were the third interval of the event. The ex ante regression model equations are specified in APPENDIX D.

Potential influence of a staggered event start time on program impacts

Section 5.4 reviews how the per-participant KW reduction of staggering the event start time for some participants would differ from events started at the same times for all participants. The pre-cooling increase in load, load reduction during the event, and increase in load during post-event rebound are estimated for 15:00–18:00 and 16:00–19:00 events and averaged to approximate a 15:00–18:00 event and staggered 16:00–19:00 event start for a portion of participants. 15:00–18:00 and 16:00–19:00 events are used because they were the most common event schedules during the 2022 season. Pre-cooling and rebound are modelled as a function of weighted actual THI (like the ex ante load reduction models described above).

To generate a THI profile typical of an event during 2022, we average the actual THI experienced by participants for each hour during the event days. This hourly THI is used in the pre-cooling models, the ex ante KW reduction models, and the recovery models to estimate pre-cooling, load reduction impacts, and rebound for each hour associated with 15:00-18:00 and 16:00-19:00 events. To approximate the per-participant results for staggered event scenarios, weighted averages of hourly per-participant impacts are calculated for 1) 75% of participants in 15:00–18:00 event and 25% in 16:00–19:00 event, 2) 50% in 15:00–18:00, 50% in 16:00–19:00, and 3) 25% in 15:00–18:00 event and 75% in 16:00–19:00 event. The results of this comparison are presented in Section 5.4 and are clearly visible in Figure 5-2.



5 RESULTS

This section presents the results of the 2022 ex post and ex ante analyses.

5.1 Ex post impacts

As stated above, ex post impacts describe what happened during an event-hour and over each event. This contrasts with ex ante impacts which describe what is predicted to happen at the Company’s peak load conditions.

The ex post per-participant KW impacts (demand reduction) are calculated for each event hour and for each event, on average across hours. The 2022 timeline in Figure 5-1 shows the average event-level impact (in KW) and average THI for each event. The red dashes are the event average THI and are plotted to provide the movement of this primary driver of load reduction. Average impacts for different event lengths are indicated by both color and shape. Light blue squares represent two-hour events and dark blue circles are for the three-hour events. In general, the magnitude of the impacts moves with THI, a combination of temperature and humidity. THI and event level impacts diverge, for example, during afternoon thunderstorms that are associated with a rapid drop in outdoor temperature. This can be seen on August 10th when the temperature in Richmond dropped 16°F between 12:54 PM and 1:47 PM.

Figure 5-1. Timeline of 2022 events by average impacts and maximum event-day THI

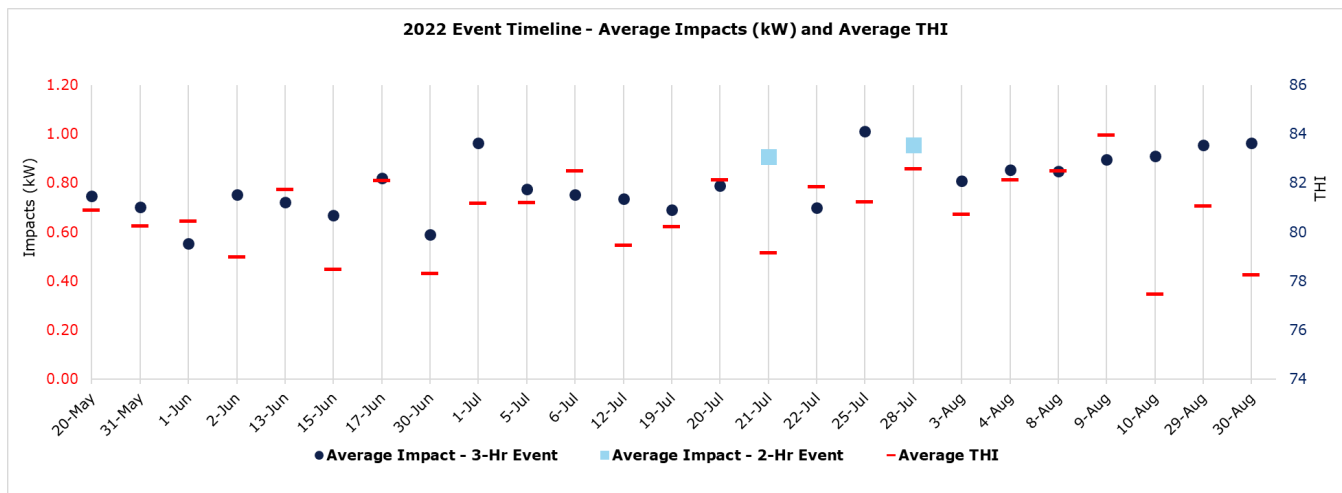


Figure 5-2 displays the estimated ex post load reduction by the event-hour for all events. The dark blue circles represent load reduction during the first hour, green circles are for the second hour, and light blue circles are for the third hour. The dotted lines represent the average load reduction for the first (dark blue), second (green), and third (light blue) hours. The average first-hour load reduction across all events, regardless of start time, is 1.10 KW. On average across all events, load reduction in the second and third hours is 68% and 47% of first hour load reduction, respectively.

Higher impacts are achieved in the first hour and then moderate as the event progresses. Because of pre-cooling, the early part of the event has a substantial differential between indoor temperature and the now raised setpoint. During this initial period, the air conditioner system remains off and no cooling occurs. As the event progresses, the internal temperature of the house rises as much as 5 degrees until it reaches the higher event-period setpoint. The rate at which the house warms is a function of the physical characteristics of the house (insulation), occupancy, household activities, and shading effects. As the internal temperature of the household rises, cooling action will re-commence but the air conditioner will require shorter run time than during a non-event period due to the higher event-setpoint. Opt-out activity also increases as the



temperature reaches and then stays at the higher temperature. Both processes contribute to the decrease in load reduction as the event proceeds, causing the dramatic and consistent pattern illustrated here.

Figure 5-2. Estimated load reduction by the order of event-hour for all events

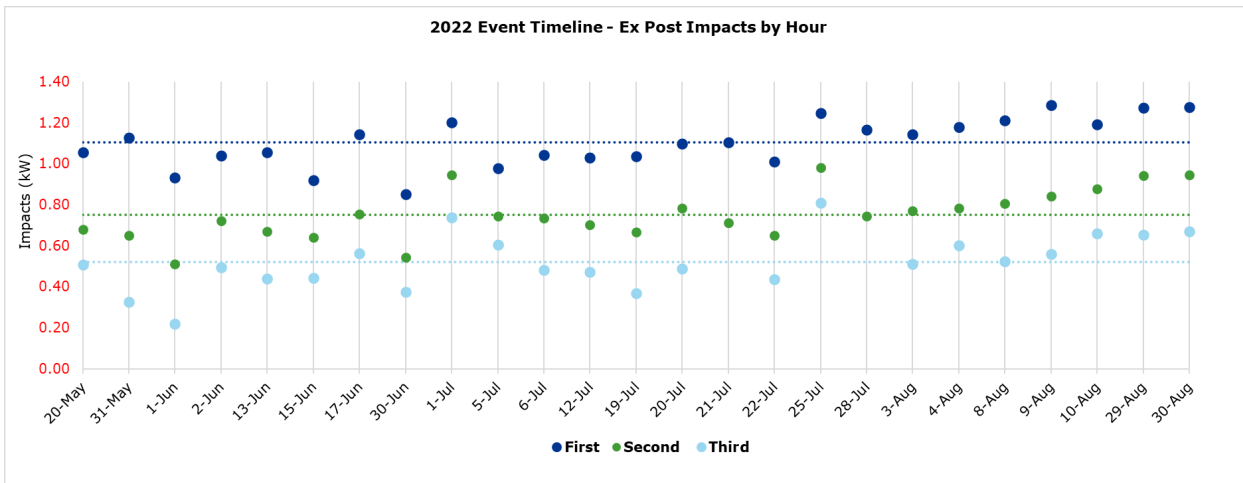


Table 5-1 displays the average ex post load reduction during the event for the four event schedules called during the 2022 season: 14:00–17:00, 15:00–18:00, 16:00–18:00, and 16:00–19:00. This table illustrates the relationship between the event start time and ex post impact during the program design hour HE 17, 16:00–17:00 (surrounded by bolded borders in the table). Load reduction during the program design hour is greatest for 16:00–18:00 and 16:00–19:00 events where HE 17 is the first hour of the event. 15:00–18:00 and 14:00–17:00 events where HE 17 is the second and third hour respectively have lower load reduction during the program design hour.

The negative values in the table represent an increase in load due to pre-cooling for the hour prior to the start of the event. The pre-cooling load increase and the interval with highest load reduction occur in consecutive hours which poses challenges for scheduling the event. If the first hour of the event aligns with the daily peak, the program produces sizable load reductions from participants. However, if the peak occurs one hour earlier and coincides with pre-cooling, program participants would experience an increase in load during that daily peak hour. Pre-cooling enables the sizable load reduction during the first event hour but can potentially increase load during the peak hour if not timed correctly.

Table 5-1. Average Ex Post Load reduction by interval for each event schedule

Event Hour	Start 14:00 End 17:00	Start 15:00 End 18:00	Start 16:00 End 18:00	Start 16:00 End 19:00
HE 14 (13:00–14:00)	-0.49			
HE 15 (14:00–15:00)	1.14	-0.48		
HE 16 (15:00–16:00)	0.85	1.15	-0.35	-0.55
HE 17 (16:00–17:00)	0.65	0.80	1.13	1.02
HE 18 (17:00–18:00)		0.55	0.73	0.67
HE 19 (18:00–19:00)				0.45
Number of Events during 2022 season	2	12	2	9

Ex post impacts by day and hour are detailed in APPENDIX C. Also shown are the number of participants, the opt-out percentage, the weighted average THI, the maximum daily temperature for Richmond, and a day number indicating the event's order for consecutive event days.



5.2 Event-day plots

The ex post plots in Figure 5-3 and Figure 5-4 on the following pages illustrate events with relatively high and low impacts, respectively. The plots are described briefly below.

The ex post estimate, or what happened during the event, is the difference between the adjusted baseline during the event (solid red line) and the event load (blue line). Values for each hour are plotted at the end of each event hour, referred to as hour ending (HE). Impacts are determined by estimating the difference between the adjusted baseline load and the event load. The results are illustrated in time-series representations of:

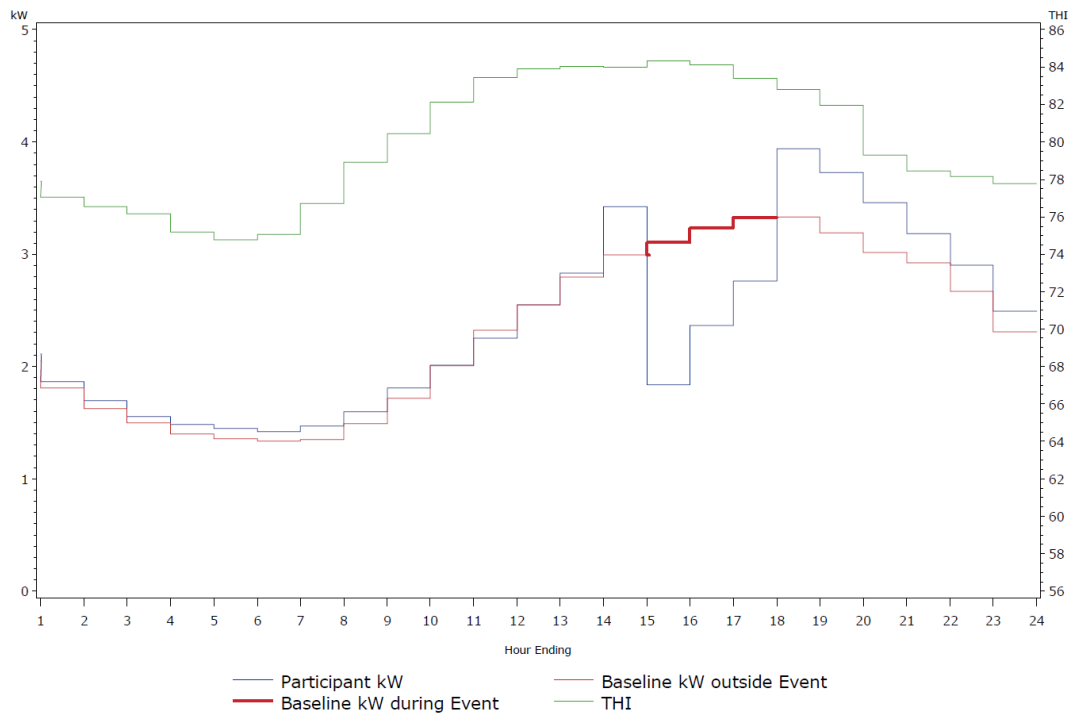
- **Event-day load profile for the Smart Thermostat Rewards Program (blue line).** The pre-cooling period immediately preceding the event is clearly visible at the first spike in KW load and is followed by a post-event load spike during snapback or rebound as the household returns to the non-event setpoint temperature.
- **Baseline during the event (bold red line).** The solid bold red line plots the baseline KW load for the event-day load curve during the event. The baseline is the predicted load for the specific event-day weather conditions adjusted upward or downward to account for underestimation or overestimation of actual consumption during pre-event hours.
- **Reference load outside the event (red line).** This line plots the baseline load profile before and after the event taken from participant AMI data.
- **Event-day THI (green line).** Hourly THIs for the closest station to each AMI household are calculated, weighted to the population, and plotted to contextualize the relationship between load, temperature, and humidity.



5.2.1 Event load profile with a high impact

Figure 5-3 shows a high-average-impact event that occurred on August 9, 2022 (0.90 KW). Pre-cooling begins at 14:00 and can be seen by the sharp increase in load for HE 15. The event begins at 15:00. Load reduction is estimated as the difference between the adjusted baseline (red) and the actual power consumption (blue) at HE 16, 17, and 18. The baseline consumption prior to the event is slightly above 2.5 KW and the THI during the first event hour is 84.3. By contrast, THI is 79 for the low-impact event shown in Figure 5-4. Load reduction in the first hour is 1.28 KW, and by the third hour has dropped to 0.56 KW.

Figure 5-3. Load profile for an event day with high impacts (August 9, 2022)

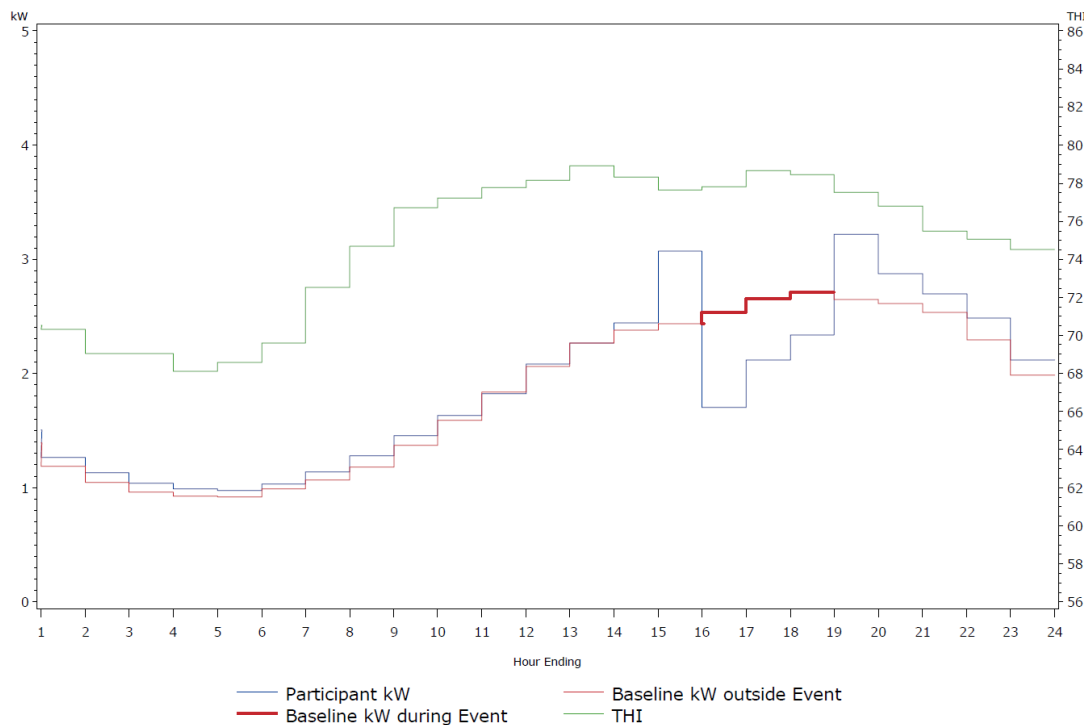




5.2.2 Event load profile with a low Impact

The second-lowest average impact (0.59 KW) occurred on June 30, 2022 and is shown in Figure 5-4. This event had the lowest weighted THI during the first event hour (78) and the second-lowest average event THI (78). Pre-cooling begins at HE 15 and can be seen by the sharp increase in load for HE 16. Baseline consumption prior to the event is approximately 2.26 KW (compared to 2.5 KW for the high-impact event shown above). The event begins at 16:00 and load reduction is visible for HE 17, 18, and 19. Load reduction in the first hour is 0.85 KW (vs 1.28 in the high-impact event), and by the third hour has dropped to 0.37 (vs. 0.56 KW).

Figure 5-4. Load profile for an event day with low impacts (June 30, 2022)



5.3 Ex ante impacts

Ex ante impacts are the predicted KW load reduction used to define peak load planning conditions and to determine load reduction potential, and are generally considered at pre-defined times, temperatures, and humidity conditions. For Dominion this is 83.4 THI during HE 17. Figure 5-5 displays the ex post estimates for HE 17 as color-coded dots. The light blue dots identify HE 17 as the first event hour while the green dots identify HE 17 as the second or third event hour. The ex ante models results are depicted as dashed lines and similarly, blue depicts the ex ante model for first-hour HE 17 and green for non-first hour HE 17. Relative to the non-first hour, HE 17 ex ante impact trend in green, the first hour HE 17 ex ante impact trend in blue is greater in magnitude across all THIs and exhibits a greater response to the increase in THI.



Figure 5-5. Ex post estimates (points) and predicted ex ante KW impacts (lines) for HE 17

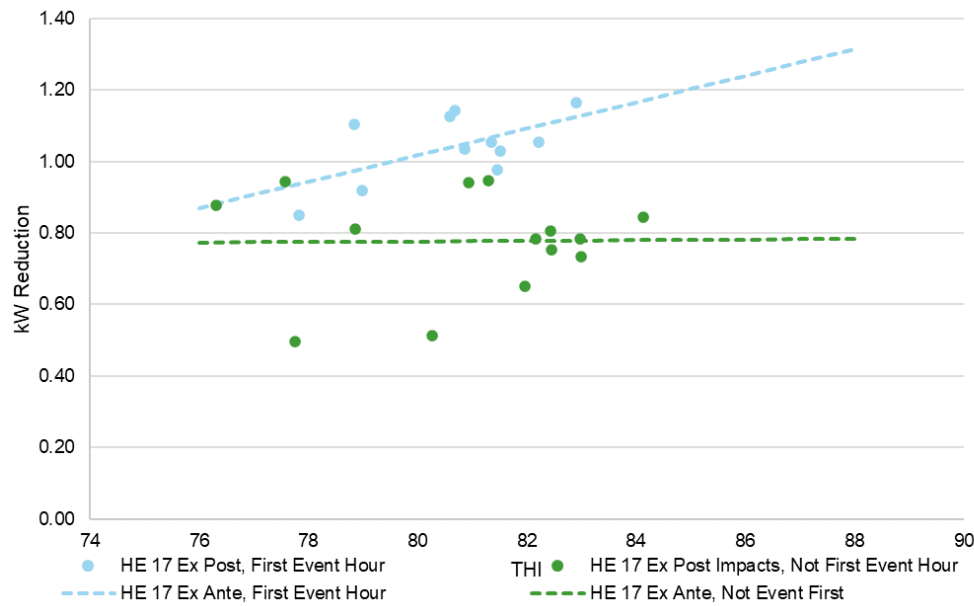


Table 5-2 displays the ex ante predicted load reduction for non-first hour HE 17 (left column) and first hour HE 17 (right column) for THIs 76 to 88. The predicted load reduction at 83.4 THI is 0.78 KW for non-first hour HE 17 and 1.14 KW for first hour HE 17 (see bolded row in Table 5-2). To generate a single ex ante estimate, we weight these two estimates based on the frequency of each HE 17 interval type during the 2022 event season. 11 of the 25 HE 17 intervals during the 2022 season were the first event hour. The remaining 14 were non-first hour impacts. The resulting ex ante impact of the Smart Thermostat Rewards Program for the Company’s peak planning conditions was 0.94 KW. It is valuable for Dominion Energy to test program performance across event start times and event durations as it has this effect of lowering the ex ante value. Dominion could also choose to begin each event at 16:00 and the ex ante value would be approximately 1.14 KW as the first hour ex ante results indicate.

Table 5-2. 2022 HE 17 Ex ante per participant impacts by THI

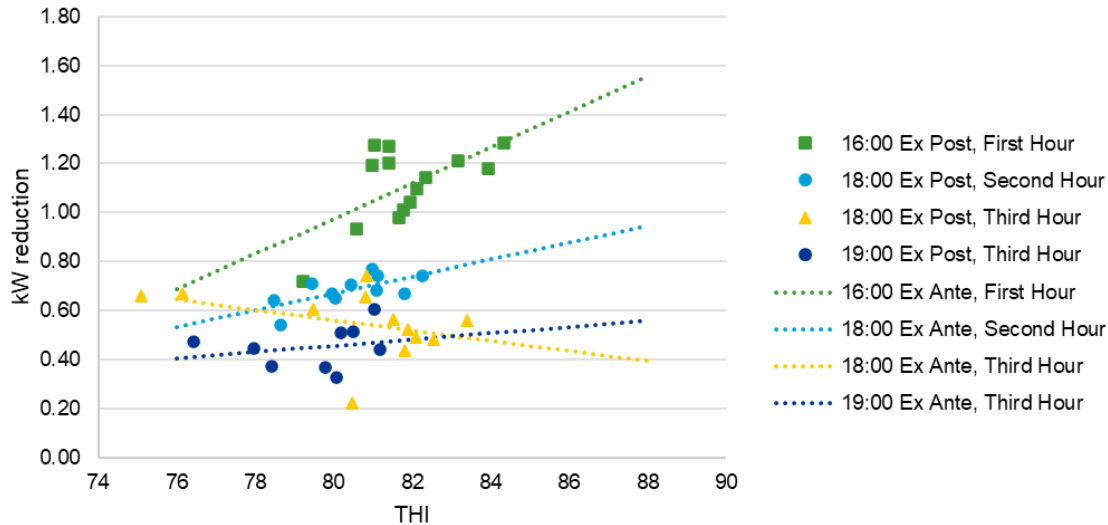
THI	HE 17 Not First Event Hour	HE 17 First Event Hour
76	0.77	0.87
77	0.77	0.91
78	0.77	0.94
79	0.78	0.98
80	0.78	1.02
81	0.78	1.05
82	0.78	1.09
83	0.78	1.13
83.4	0.78	1.14
84	0.78	1.17
85	0.78	1.20



THI	HE 17 Not First Event Hour	HE 17 First Event Hour
86	0.78	1.24
87	0.78	1.28
88	0.78	1.31

We have focused so far on HE 17, but the daily system peak may occur during other hours. In 2022, only one of the five PJM Summer Coincident Peaks occurred during HE 17 so it might be of interest to review predicted load reduction for other hours. Figure 5-6 displays ex post and ex ante estimates of KW impact for the remaining hours not plotted above (HE 16, 18, and 19). HE 16 has high predicted ex ante impacts (green) because 12 of the 14 hours are the first interval of the event. The HE 18 ex ante estimates from second event hours (medium blue circles) tend to have greater impacts than HE 18 estimates from third event hours (yellow triangles). HE 19 KW estimates (dark circles) are all the third hour of events and have lower predicted impacts.

Figure 5-6. Ex post estimates (points) and predicted ex ante KW impacts (lines) for HE 16, 18, and 19



The ex ante predicted KW impacts for HE 16 through 19 are displayed below in Table 5-1 for 76 to 88 THI. The HE columns are arranged to compare the estimated impacts during a 15:00–18:00 event with impacts during a 16:00–19:00 event. At program planning 83.4 THI, the predicted load reduction is greater for HE 16 than the first hour HE 17 of a 16:00–19:00 event.



Table 5-3. 2022 HE 16, 18, 19 ex ante per participant impacts by THI

Event Schedule	15:00–18:00 Event			16:00–19:00 Event		
	HE 16	HE 17, Not First Event Hour	HE 18, Third Hour	HE 17 First Event Hour	HE 18, Second Hour	HE 19, Third Event Hour
THI						
76	0.69	0.77	0.64	0.87	0.53	0.41
77	0.76	0.77	0.62	0.91	0.57	0.42
78	0.83	0.77	0.60	0.94	0.60	0.43
79	0.90	0.78	0.58	0.98	0.64	0.44
80	0.98	0.78	0.56	1.02	0.67	0.46
81	1.05	0.78	0.54	1.05	0.70	0.47
82	1.12	0.78	0.52	1.09	0.74	0.48
83	1.19	0.78	0.50	1.13	0.77	0.49
84	1.27	0.78	0.48	1.17	0.81	0.51
85	1.34	0.78	0.46	1.20	0.84	0.52
86	1.41	0.78	0.43	1.24	0.88	0.53
87	1.48	0.78	0.41	1.28	0.91	0.54
88	1.56	0.78	0.39	1.31	0.95	0.56

Table 5-4 displays the predicted KW reduction for each event hour during 15:00–18:00 and 16:00–19:00 events using the ex ante models and the average THI on event days for HE 16-19. The interval with highest load reduction occurs during HE 16:00 in the 15:00–18:00 event. The total load reduction during the 15:00–18:00 event (2.41 KW) is greater than total load reduction during the 16:00–19:00 event (2.17 KW). For a typical event during the 2022 season, a 15:00–18:00 scheduled event is predicted to generate a greater single interval KW reduction and a greater total reduction than a 16:00–19:00 event.

Table 5-4. 2022 Ex ante per participant impacts during 15:00–18:00 and 16:00–19:00 events

Hour Ending	Weighted THI	15:00–18:00 Event	16:00–19:00 Event
HE 16:00	81.40	1.08	–
HE 17:00	80.77	0.78	1.05
HE 18:00	80.19	0.56	0.68
HE 19:00	79.32	–	0.45
Total Impact	–	2.41	2.17

5.4 Event optimization

Figure 5-7 below displays the per-participant pre-cooling, load reduction, and rebound KW for a 15:00–18:00 event (dark blue), 16:00–19:00 event (green), and three staggered event scenarios: 1) 75% of participants in 15:00–18:00 event, 25% of participants in 16:00–19:00 event (medium blue), 2) 50% in 15:00–18:00, 50% in 16:00–19:00 (light blue), and 3) 25% in 15:00–18:00, 75% in 16:00–19:00 (yellow). The five panels represent HE 15 through HE 20. The bars represent the KW load reduction (positive values) or load increase (negative values) for the event scenario. For 15:00–18:00 participants (dark blue), pre-cooling occurs during HE 15 (14:00–15:00) which increases load. If the start of the event is delayed for some

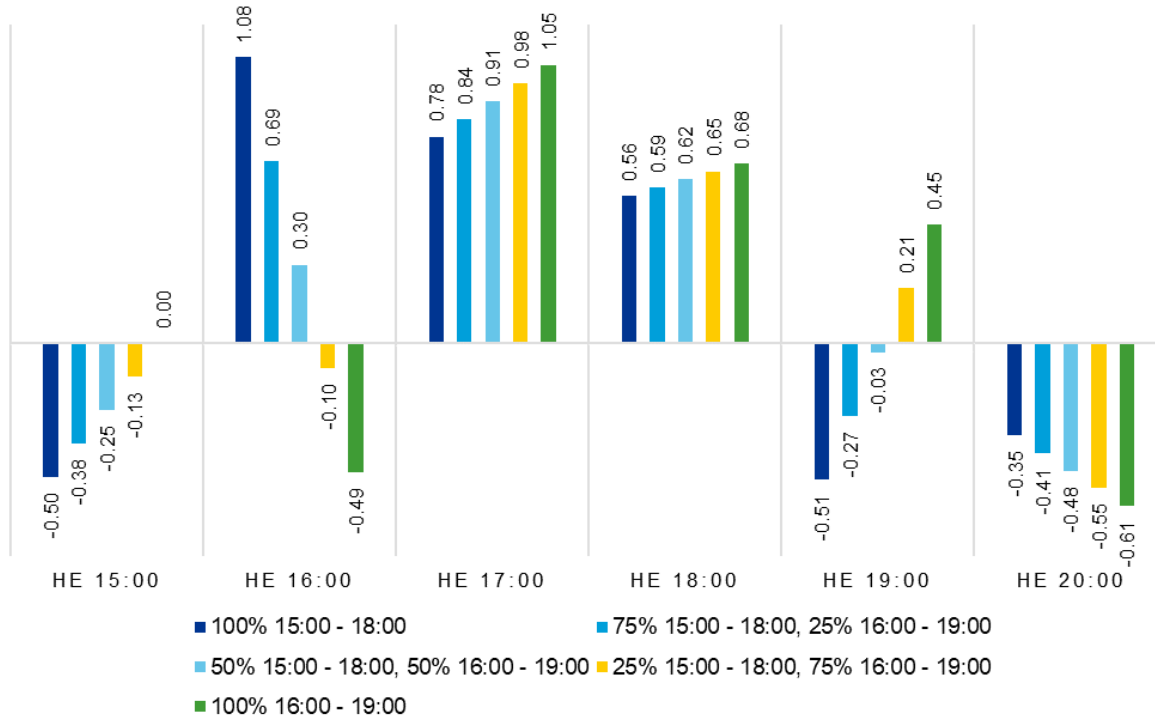


participants until 16:00 (medium blue, light blue, and yellow), the increased load during HE 15 is lower because pre-cooling has not started for a portion of participants.

In HE 16:00, participants on the 15:00–18:00 event schedule experience the first hour of load reduction while participants on the 16:00–19:00 event schedule experience pre-cooling so this hour is a mix of high load reduction and load increase associated with pre-cooling for the three staggered event scenarios. During HE 17, the 16:00–19:00 event participants are experiencing the first event hour of high load reduction while 15:00–18:00 participants undergo the second event hour of lower load reduction. HE 17 has the highest load reduction for the three staggered event scenarios in the table below. HE 18 is a mix of lower load reduction from the second and third event hours for the staggered scenarios. For 15:00–18:00 event participants, rebound begins during HE 19 as an increase in consumption due to the house returning to the non-event set point temperature. Meanwhile, 16:00–19:00 event participants experience the third hour of load reduction. Depending on the staggered scenario, HE 19 ranges from small load increase to small decrease. During HE 20, load increases as participants in all scenarios experience recovery.

As compared to the 100% of participants in 15:00–18:00 event or 100% of participants in 16:00–19:00 event, the staggered event scenarios reduce the pre-cooling increase in load experienced in any single interval. Pre-cooling in HE 15 for 15:00–18:00 participants is combined with no action for 16:00–19:00 participants and pre-cooling during HE 16 for 16:00–19:00 participants is combined with first hour load reduction for 15:00–18:00 participants. The high first hour load reductions in the 100% of participants in 15:00–18:00 event or 100% in 16:00–19:00 event are also tempered in the staggered start times scenarios. During HE 16, first hour high impacts for 15:00–18:00 participants are mixed with the increased load from the pre-cooling of 16:00–19:00 participants. Similarly, for HE 17, high first hour impacts for the 16:00–19:00 participants are mixed with the lower second hour impacts of 15:00–18:00 participants.

Figure 5-7. Per-participant pre-cooling, load reduction, and rebound KW for HE 15-20 for event scenarios





APPENDIX A. AMI DATA CLEANING AND ATTRITION

AMI data cleaning

The analysis uses half-hourly AMI whole-house consumption data from all participants that have AMI meters. The AMI data is first subset to the accounts that appear in Smart Thermostat Rewards event telemetry data and tracking data. Accounts that only appear in the AMI data before May 20, 2022, or only after August 30, 2022, and accounts which AMI observations that did not overlap with the event data are removed.

AMI data attrition

Table 5-5 summarizes attrition for the AMI data.

Table 5-5. Attrition of participant AMI data (2022)

Data prep	Number of accounts	Remaining population
Participant AMI accounts	5,956	
Number of accounts that appeared in the AMI data before June 1, 2021, only, or after September 30, 2021, only	-222	5,734
Accounts removed because the AMI and event data did not overlap (new AMI meters)	-28	
Accounts included in the analysis		5,706



APPENDIX B. EXTRAPOLATING THE AMI-ENABLED ACCOUNT IMPACTS TO THE PROGRAM POPULATION

Sample weights

Sample weights are created to extrapolate the AMI-enabled account impacts to the program population using the following method:

- Construct a list of all event participants by division from the thermostat event data.
- Stratify the participants based on state and division.
- Calculate weights based on the number of AMI participants for each event relative to all participants within each stratum.⁵

Table 5-6. Participants, AMI participants, and sample weights by division or State for August 30, 2022⁶

Division/State	Total Participants by Division		Total AMI Participants by Division		Percentage AMI by Division	Weight
	Counts	2021 Avg Cooling Load	Counts	2021 Avg Cooling Load		
Northwest	4,184	2,121.38	2,009	2,137.59	48%	2.08
Central	2,406	2,921.17	1,836	2,907.13	76%	1.31
Eastern	1,926	3,556.06	1,351	3,502.18	70%	1.43
North Carolina	135	5,268.15	3	2,525.04	2%	45.00
Total	8,651 ⁷	2,712.33	5,199	2,764.17	60%	

⁵ The weight within each stratum is the population divided by the total number of AMI meters in the study group.

⁶ The table shows total participants and AMI participants in the last event on August 30, 2022.

⁷ Please note that the total number of participants in this table differs slightly from the August 30 participants in Table 5-4. This is because we could not identify 91 accounts in the August 30, 2022 Thermostat Event data in the BI tracking data. As a result, we were unable to determine the region for these accounts and could not use them in developing the sample weights.



APPENDIX C. EX POST IMPACT EVENT DATA

Ex post impacts by day and hour are presented in Table 5-7. Also shown are the number of participants, the opt out percent, the weighted average THI, the maximum daily temperature for Richmond, and a day number indicating the event’s order for consecutive event days.⁸ The highest average event impact (1.01 KW) occurred on August 9, and the lowest (0.55) on June 1. The maximum impact for a single interval in 2022 was 1.28 KW on August 9. The greatest estimated impact is always during the first hour interval during the event and the impacts decrease during subsequent intervals.

Table 5-7. Smart Thermostat Rewards ex post impacts by event-day and hour (June 7–August 26, 2021)

Event Date	20-May	31-May	1-Jun	2-Jun	13-Jun	15-Jun	17-Jun	30-Jun	1-Jul	5-Jul	6-Jul	12-Jul	19-Jul	20-Jul
# of Participants	7,387	7,424	7,431	7,406	7,637	7,693	7,721	7,902	7,924	7,980	8,040	8,189	8,316	8,315
Consecutive Event-days			2	3				2			2			2
Opt Out %	16%	20%	19%	15%	19%	17%	18%	16%	15%	10%	15%	16%	16%	17%
Weighted Avg THI	81	80	80	79	82	78	82	78	81	81	82	79	80	82
Richmond Max Temp	96	95	95	94	95	89	96	88	91	90	93	93	92	95
HE 15				1.04										
HE 16			0.93	0.72			1.14		1.20		1.04			1.10
HE 17	1.05	1.13	0.51	0.50	1.05	0.92	0.75	0.85	0.95	0.98	0.73	1.03	1.04	0.78
HE 18	0.68	0.65	0.22		0.67	0.64	0.56	0.54	0.74	0.74	0.48	0.70	0.67	0.49
HE 19	0.51	0.33			0.44	0.44		0.37		0.60		0.47	0.37	
Average Impact (KW)	0.75	0.70	0.55	0.75	0.72	0.67	0.82	0.59	0.96	0.77	0.75	0.74	0.69	0.79

Event Date	21-Jul	22-Jul	25-Jul	28-Jul	3-Aug	4-Aug	8-Aug	9-Aug	10-Aug	29-Aug	30-Aug
# of Participants	8,317	8,311	8,369	8,434	8,490	8,467	8,452	8,488	8,537	8,766	8,742
Consecutive Event-days	3	4	5			2		2	3		2
Opt Out %	12%	15%	14%	11%	16%	17%	16%	19%	16%	17%	15%
Weighted Avg THI	79	82	81	83	81	82	82	84	77	81	78
Richmond Max Temp	95	94	94	95	94	95	93	95	92	92	94
15:00			1.25								
16:00		1.01	0.98			1.18	1.21	1.28	1.19	1.27	1.27

⁸ The THI reported in Table 5-4 is the THI at the weather station designated by Dominion for each AMI participant weighted to the population of RT Demand Response participants.



Event Date	21-Jul	22-Jul	25-Jul	28-Jul	3-Aug	4-Aug	8-Aug	9-Aug	10-Aug	29-Aug	30-Aug
17:00	1.10	0.65	0.81	1.16	1.14	0.78	0.81	0.84	0.88	0.94	0.94
18:00	0.71	0.44		0.74	0.77	0.60	0.52	0.56	0.66	0.65	0.67
19:00					0.51						
Average Impact (KW)	0.91	0.70	1.01	0.95	0.81	0.85	0.85	0.90	0.91	0.96	0.96



APPENDIX D. BASELINE AND EX ANTE REGRESSION EQUATIONS

Baseline regression equations

Regression used to determine the degree day base:

$$kW = \beta_0 + \beta_1 * Hour_1 + \beta_2 * Hour_2 + \dots + \beta_{23} * Hour_{23} + \beta_{24} * \max(0, THI - Degree\ Day\ Base)$$

Regression used to determine baseline:

$$kW = \beta_0 + \beta_1 * Hour_1 + \beta_2 * Hour_2 + \dots + \beta_{23} * Hour_{23} + \beta_{24} * \max(0, THI - Degree\ Day\ Base) + \beta_{25} * Hour_1 * \max(0, THI - Degree\ Day\ Base) + \beta_{26} * Hour_2 * \max(0, THI - Degree\ Day\ Base) + \dots + \beta_{48} * Hour_{23} * \max(0, THI - Degree\ Day\ Base)$$

Ex ante regression equations

HE 16:00 Ex Ante Regression Model

$$Ex\ Post\ kW\ reduction_{16:00} = \beta_{0,16:00} + \beta_{1,16:00} * Weighted\ THI_{16:00}$$

HE 17:00 Ex Ante Regression Model

$$Ex\ Post\ kW\ reduction_{17:00} = \beta_{0,17:00} + \beta_{1,17:00} * Weighted\ THI_{17:00} + \beta_{2,17:00} * First\ Interval + \beta_{3,17:00} * First\ Interval * Weighted\ THI_{17:00}$$

where *First Interval* = 1 if HE 17:00 is the first hour interval during the event and
 = 0 if HE 17:00 is the second or third hour interval during the event.

HE 18:00 Ex Ante Regression Model

$$Ex\ Post\ kW\ reduction_{18:00} = \beta_{0,18:00} + \beta_{1,18:00} * Weighted\ THI_{18:00} + \beta_{2,18:00} * Second\ Interval + \beta_{3,18:00} * Second\ Interval * Weighted\ THI_{18:00}$$

where *Second Interval* = 1 if HE 18:00 is the second hour interval during the event and
 = 0 if HE 18:00 is the third hour interval.

HE 19:00 Ex Ante Regression Model

$$Ex\ Post\ kW\ reduction_{19:00} = \beta_{0,19:00} + \beta_{1,19:00} * Weighted\ THI_{19:00}$$



About DNV

DNV is a global quality assurance and risk management company. Driven by our purpose of safeguarding life, property and the environment, we enable our customers to advance the safety and sustainability of their business. We provide classification, technical assurance, software and independent expert advisory services to the maritime, oil & gas, power and renewables industries. We also provide certification, supply chain and data management services to customers across a wide range of industries. Operating in more than 100 countries, our experts are dedicated to helping customers make the world safer, smarter and greener.



Appendices O and P Program Performance Indicator Tables for Virginia and North Carolina 2010 – 2022

Public Version

Date: June 15, 2023

Prepared by DNV Energy Insights USA (DNV)





O. PROGRAM PERFORMANCES INDICATOR TABLES FOR VIRGINIA

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Jun 15 2023



O.1 Virginia Residential Efficient Products Marketplace Program 2019–2022

O.1.1 2019–2022 Virginia Residential Efficient Products Marketplace Annual Indicator Tables

VA - Residential Efficient Products Marketplace Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$156,691	\$421,278	\$396,645	\$415,532	\$1,390,146
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$4,636,049	\$8,063,058	\$8,459,198	\$9,952,004	\$31,110,309
Costs (\$)		Planned	\$6,860,889	\$6,694,699	\$7,086,043	\$9,928,503	\$30,570,134
Costs (\$)		Variance	-\$2,224,840	\$1,368,359	\$1,373,155	\$23,501	\$540,175
		Annual % of Planned	68%	120%	119%	100%	102%
Participants ¹		Total (Gross)	2,785,850	2,596,966	4,263,855	5,163,385	14,810,056
		Planned	2,972,475	2,173,404	2,514,548	2,744,285	10,404,712
		Variance	-186,625	423,562	1,749,307	2,419,100	4,405,344
		Annual % of Planned (Gross)	94%	119%	170%	188%	142%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	81,119,512	89,881,928	122,317,496	150,318,593	443,637,529
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	81,119,512	89,881,928	122,317,496	150,318,593	443,637,529
		Net-To-Gross Rate Weighted by Measure	70%	67%	49%	50%	57%
		Net-To-Gross Adjustment (kWh/yr)	-24,335,854	-29,809,274	-62,039,898	-74,705,269	-190,890,295
		Net Adjusted Savings (kWh/yr)	56,783,659	60,072,654	60,277,598	75,613,324	252,747,234
		Planned Net Savings (kWh/yr)	73,066,461	62,883,254	72,753,598	79,400,595	288,103,910
		Annual % Toward Planned Net Savings	77.7%	95.5%	82.9%	95.2%	87.7%
		Avg. Gross Savings Per Participant (kWh/yr)	29	35	29	29	30
		Avg. Net Savings Per Participant (kWh/yr)	20	23	14	15	17
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	7,421.2	8,295.1	11,274.4	13,820.6	40,811.2
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	7,421.2	8,295.1	11,274.4	13,820.6	40,811.2
		Net-To-Gross Rate Weighted by Measure	70%	67%	49%	50%	57%
		Net-To-Gross Adjustment (kW)	-2,226.4	-2,763.5	-5,725.2	-6,874.7	-17,589.8
		Net Adjusted Demand Reduction (kW)	5,194.9	5,531.6	5,549.2	6,945.9	23,221.5
		Planned Net Savings (kW)	520.2	806.3	932.9	1,018.1	3,277.5
		Annual % Toward Planned Net Reduction	998.7%	686.0%	594.8%	682.2%	708.5%
		Avg. Gross Demand Reduction Per Participant (kW)	0.00	0.00	0.00	0.00	0.00
		Avg. Net Demand Reduction Per Participant (kW)	0.00	0.00	0.00	0.00	0.00
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	23,471.9	29,038.4	52,510.3
		Realization Rate Weighted by Measure	-	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	23,471.9	29,038.4	52,510.3
		Net-To-Gross Rate Weighted by Measure	-	-	50%	50%	50%
		Net-To-Gross Adjustment (kW)	-	-	-11,851.5	-14,385.1	-26,236.6
		Net Adjusted Demand Reduction (kW)	-	-	11,620.4	14,653.2	26,273.7
		Planned Net Savings (kW)	0.0	0.0	932.9	1,018.1	1,951.0
		Annual % Toward Planned Net Reduction	-	-	1245.6%	1439.2%	1346.7%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	0.01	0.01	0.01
		Avg. Net Demand Reduction Per Participant (kW)	-	-	0.00	0.00	0.00
Program Performance		Cum. \$Admin. per Participant (Gross)	\$0.06	\$0	\$0	\$0.09	\$0.09
		Cum. \$Admin. per kWh/year (Gross)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
		Cum. \$Admin. per kW (Gross)	\$21	\$37	\$36	\$34	\$34
		Cum. \$EM&V per \$Total	1.9%	2.2%	2.9%	2.5%	2.5%
		Cum. \$Rebate per Participant (Gross)	\$1	\$2	\$2	\$1	\$1



O.1.2 2022 Virginia Residential Efficient Products Marketplace Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2019-2022 Total
VA - Residential Efficient Products Marketplace Program	Direct Rebate		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct EM&V		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Indirect Other (Administrative)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)			\$538,586	\$935,526	\$892,789	\$850,496	\$908,030	\$849,315	\$724,337	\$719,938	\$862,422	\$897,707	\$893,928	\$878,931	\$8,962,004	\$31,110,309
Costs (\$)			\$827,375	\$827,375	\$827,375	\$827,375	\$827,375	\$827,375	\$827,375	\$827,375	\$827,375	\$827,375	\$827,375	\$827,375	\$827,375	\$9,928,503
Costs (\$)			\$288,790	\$108,151	\$85,414	\$23,121	\$80,655	\$21,940	-\$103,038	-\$107,437	\$35,047	\$70,331	\$66,552	\$51,556	\$23,501	\$540,175
Variance			5.4%	14.8%	23.8%	32.4%	41.6%	50.1%	57.4%	64.7%	73.3%	82.4%	91.4%	100.2%	100%	102%
Annual % of Planned																
Participants*			440,730	433,432	463,118	378,219	455,256	400,148	469,923	405,165	357,897	538,617	459,682	361,197	5,163,385	14,810,056
Total (Gross)			228,690	228,690	228,690	228,690	228,690	228,690	228,690	228,690	228,690	228,690	228,690	228,690	2,744,285	10,404,712
Planned			212,035	204,742	234,428	149,529	228,566	171,458	241,233	176,479	129,207	308,927	230,992	132,507	2,419,100	4,405,344
Variance			16%	32%	49%	63%	79%	94%	111%	126%	139%	158%	175%	188%	188%	142%
Annual % of Planned (Gross)																
Total			13,185,489	12,591,181	13,450,842	10,894,411	13,144,337	11,688,954	13,415,439	11,850,071	10,459,095	15,657,684	13,356,252	10,614,838	150,318,593	443,637,529
Total Gross Energy Savings (kWh/yr)			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realization Rate Adjusted (kWh/yr)			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Realization Rate Adjusted Savings (kWh/yr)			13,185,489	12,591,181	13,450,842	10,894,411	13,144,337	11,688,954	13,415,439	11,850,071	10,459,095	15,657,684	13,356,252	10,614,838	150,318,593	443,637,529
Net-To-Gross Rate Weighted by Measure			50%	50%	51%	50%	50%	51%	50%	50%	50%	50%	50%	50%	50%	57%
Net-To-Gross Adjusted Savings (kWh/yr)			-6,547,645	-6,217,404	-6,588,448	-5,479,484	-6,567,447	-5,773,137	-6,663,671	-5,930,989	-5,214,061	-7,770,129	-6,659,212	-5,233,659	-74,705,269	-190,890,295
Net Adjusted Savings (kWh/yr)			6,637,844	6,313,777	6,862,394	5,414,947	6,576,890	5,925,817	6,751,767	5,919,079	5,245,034	7,887,555	6,697,040	5,381,179	75,613,324	252,747,234
Planned Net Savings (kWh/yr)			6,616,849	6,616,704	6,616,704	6,616,704	6,616,704	6,616,704	6,616,704	6,616,704	6,616,704	6,616,704	6,616,704	6,616,704	79,400,595	288,103,910
Annual % Toward Planned Net Savings			8.36%	16.3%	25.0%	31.8%	40.1%	47.5%	56.0%	63.5%	70.1%	80.0%	88.5%	95.2%	95.2%	87.7%
Avg. Gross Savings Per Participant (kWh/yr)			30	29	29	29	29	29	29	29	29	29	29	29	29	30
Avg. Net Savings Per Participant (kWh/yr)			15	15	15	14	14	15	14	15	15	15	15	15	15	17
Total Gross Demand Reduction (kW)			1,212.4	1,158.2	1,236.4	989.4	1,206.9	1,074.8	1,232.8	1,095.9	981.5	1,438.3	1,226.8	976.1	13,820.6	40,811.2
Realization Rate Weighted by Measure			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realization Rate Adjusted (kW)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Realization Rate Adjusted Gross Demand Reduction (kW)			1,212.4	1,158.2	1,236.4	989.4	1,206.9	1,074.8	1,232.8	1,095.9	981.5	1,438.3	1,226.8	976.1	13,820.6	40,811.2
Net-To-Gross Rate Weighted by Measure			50%	50%	51%	50%	50%	51%	50%	50%	50%	50%	50%	50%	50%	57%
Net-To-Gross Adjusted (kW)			-602.7	-578.1	-606.3	-502.9	-603.5	-530.8	-612.8	-546.3	-479.6	-714.8	-612.0	-481.8	-6,874.7	-17,589.8
Net Adjusted Demand Reduction (kW)			609.6	580.1	630.1	496.5	603.4	544.0	620.0	546.6	481.9	724.5	614.8	494.3	6,945.9	23,221.5
Planned Net Savings (kW)			84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	1,018.1	3,277.5
Annual % Toward Planned Net Reduction			59.9%	116.9%	178.7%	227.5%	286.8%	340.2%	401.1%	454.3%	502.1%	573.3%	633.7%	682.2%	708.5%	708.5%
Avg. Gross Demand Reduction Per Participant (kW)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avg. Net Demand Reduction Per Participant (kW)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Gross Demand Reduction (kW)			2,542.5	2,424.4	2,595.0	2,114.9	2,545.6	2,266.6	2,596.6	2,264.3	2,024.3	3,027.8	2,587.6	2,048.9	29,038.4	82,510.3
Realization Rate Weighted by Measure			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realization Rate Adjusted (kW)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Realization Rate Adjusted Gross Demand Reduction (kW)			2,542.5	2,424.4	2,595.0	2,114.9	2,545.6	2,266.6	2,596.6	2,264.3	2,024.3	3,027.8	2,587.6	2,048.9	29,038.4	82,510.3
Net-To-Gross Rate Weighted by Measure			51%	50%	51%	50%	50%	51%	50%	50%	50%	50%	50%	50%	50%	50%
Net-To-Gross Adjusted (kW)			-1,257.6	-1,203.5	-1,265.9	-1,061.6	-1,268.5	-1,115.7	-1,286.3	-1,127.3	-1,066.7	-1,498.2	-1,287.3	-1,066.6	-14,385.1	-26,236.6
Net Adjusted Demand Reduction (kW)			1,284.9	1,220.9	1,329.1	1,053.3	1,277.1	1,150.9	1,310.3	1,137.0	1,017.5	1,526.6	1,300.3	1,042.3	14,683.2	26,273.7
Planned Net Savings (kW)			84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	1,018.1	3,277.5
Annual % Toward Planned Net Reduction			126.2%	246.1%	376.7%	480.1%	605.6%	718.6%	847.3%	959.0%	1058.9%	1209.1%	1336.9%	1439.2%	1439.2%	1439.2%
Avg. Gross Demand Reduction Per Participant (kW)			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Avg. Net Demand Reduction Per Participant (kW)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cum. Admin. per Participant (Gross)			\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.09	\$0.09
Cum. Admin. per kWh/year (Gross)			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Cum. Admin. per kW (Gross)			\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$34	\$34
Cum. \$EM&V per \$Total			2.8%	2.7%	2.7%	2.7%	2.6%	2.6%	2.5%	2.5%	2.6%	2.5%	2.6%	2.5%	2.5%	2.5%
Cum. \$Rebate per Participant (Gross)			\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1



O.1.3 2019–2022 Virginia Residential Efficient Products Marketplace (DSM Phase VII) Measure Indicator Tables

VA - Residential Efficient Products Marketplace Program			2019	2020	2021	2022	2019-2022
Measures							
	Fixture and Retrofit Kit	Total Participants	136,308	387,740	7,689	81,489	613,225
Installed kWh/year	Fixture and Retrofit Kit	Total Gross Energy Savings (kWh/yr)	5,927,303	16,763,619	304,985	3,269,740	26,265,647
	Fixture and Retrofit Kit	Net Adjusted Savings (kWh/yr)	4,149,112	10,058,172	158,592	1,700,265	16,066,141
Installed Summer peak kW	Fixture and Retrofit Kit	Total Gross Demand Reduction (kW)	542.3	1,533.6	27.9	299.1	2,402.9
	Fixture and Retrofit Kit	Net Adjusted Demand Reduction (kW)	379.6	920.2	14.5	155.5	1,469.8
Installed Winter peak kW	Fixture and Retrofit Kit	Total Gross Demand Reduction (kW)	-	-	59.7	639.5	699.2
	Fixture and Retrofit Kit	Net Adjusted Demand Reduction (kW)	-	-	31.0	332.6	363.6
	Reflector	Total Participants	524,844	1,138,999	565,125	1,009,738	3,238,707
Installed kWh/year	Reflector	Total Gross Energy Savings (kWh/yr)	19,514,513	42,208,916	22,219,189	36,850,573	120,793,191
	Reflector	Net Adjusted Savings (kWh/yr)	13,660,159	32,078,776	12,220,554	20,267,815	78,227,304
Installed Summer peak kW	Reflector	Total Gross Demand Reduction (kW)	1,785.3	3,861.5	2,032.7	3,371.3	11,050.8
	Reflector	Net Adjusted Demand Reduction (kW)	1,249.7	2,934.7	1,118.0	1,854.2	7,156.6
Installed Winter peak kW	Reflector	Total Gross Demand Reduction (kW)	-	-	4,345.8	7,207.6	11,553.4
	Reflector	Net Adjusted Demand Reduction (kW)	-	-	2,390.2	3,964.2	6,354.4
	Specialty	Total Participants	333,242	1,006,323	1,058,860	960,609	3,359,034
Installed kWh/year	Specialty	Total Gross Energy Savings (kWh/yr)	9,035,758	26,850,426	29,532,210	27,495,882	92,914,275
	Specialty	Net Adjusted Savings (kWh/yr)	6,325,031	15,841,751	11,812,884	10,998,353	44,978,018
Installed Summer peak kW	Specialty	Total Gross Demand Reduction (kW)	826.6	2,456.4	2,701.8	2,515.5	8,500.3
	Specialty	Net Adjusted Demand Reduction (kW)	578.6	1,449.3	1,080.7	1,006.2	4,114.8
Installed Winter peak kW	Specialty	Total Gross Demand Reduction (kW)	-	-	5,776.2	5,377.9	11,154.1
	Specialty	Net Adjusted Demand Reduction (kW)	-	-	2,310.5	2,151.2	4,461.6



VA - Residential Efficient Products Marketplace Program			2019	2020	2021	2022	2019-2022
Measures							
	ENERGY STAR Dehumidifier	Total Participants	0	836	1,146	990	2,972
Installed kWh/year	ENERGY STAR Dehumidifier	Total Gross Energy Savings (kWh/yr)	0	86,633	117,914	99,921	304,467
	ENERGY STAR Dehumidifier	Net Adjusted Savings (kWh/yr)	0	52,846	63,674	53,957	170,477
Installed Summer peak kW	ENERGY STAR Dehumidifier	Total Gross Demand Reduction (kW)	0.0	19.6	26.7	22.7	69.0
	ENERGY STAR Dehumidifier	Net Adjusted Demand Reduction (kW)	0.0	12.0	14.4	12.2	38.6
Installed Winter peak kW	ENERGY STAR Dehumidifier	Total Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
	ENERGY STAR Dehumidifier	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0	0.0
	ENERGY STAR Dishwasher	Total Participants	0	2,430	3,274	3,110	8,814
Installed kWh/year	ENERGY STAR Dishwasher	Total Gross Energy Savings (kWh/yr)	0	87,473	117,307	111,432	316,212
	ENERGY STAR Dishwasher	Net Adjusted Savings (kWh/yr)	0	44,611	43,404	41,230	129,245
Installed Summer peak kW	ENERGY STAR Dishwasher	Total Gross Demand Reduction (kW)	0.0	10.8	14.5	13.8	39.2
	ENERGY STAR Dishwasher	Net Adjusted Demand Reduction (kW)	0.0	5.5	5.4	5.1	16.0
Installed Winter peak kW	ENERGY STAR Dishwasher	Total Gross Demand Reduction (kW)	-	-	3.4	3.2	6.5
	ENERGY STAR Dishwasher	Net Adjusted Demand Reduction (kW)	-	-	1.2	1.2	2.4
	ENERGY STAR Freezer	Total Participants	0	223	317	274	814
Installed kWh/year	ENERGY STAR Freezer	Total Gross Energy Savings (kWh/yr)	0	8,556	13,915	13,172	35,643
	ENERGY STAR Freezer	Net Adjusted Savings (kWh/yr)	0	4,449	5,427	5,137	15,013
Installed Summer peak kW	ENERGY STAR Freezer	Total Gross Demand Reduction (kW)	0.0	1.4	2.2	2.1	5.8
	ENERGY STAR Freezer	Net Adjusted Demand Reduction (kW)	0.0	0.7	0.9	0.8	2.4
Installed Winter peak kW	ENERGY STAR Freezer	Total Gross Demand Reduction (kW)	-	-	0.7	0.6	1.3
	ENERGY STAR Freezer	Net Adjusted Demand Reduction (kW)	-	-	0.3	0.2	0.5
	ENERGY STAR Refrigerator	Total Participants	0	4,293	5,334	4,200	13,827
Installed kWh/year	ENERGY STAR Refrigerator	Total Gross Energy Savings (kWh/yr)	0	264,754	336,446	272,914	874,114
	ENERGY STAR Refrigerator	Net Adjusted Savings (kWh/yr)	0	103,254	131,214	106,437	340,904
Installed Summer peak kW	ENERGY STAR Refrigerator	Total Gross Demand Reduction (kW)	0.0	42.8	54.3	44.1	141.1
	ENERGY STAR Refrigerator	Net Adjusted Demand Reduction (kW)	0.0	16.7	21.2	17.2	55.0
Installed Winter peak kW	ENERGY STAR Refrigerator	Total Gross Demand Reduction (kW)	-	-	16.1	13.0	29.1
	ENERGY STAR Refrigerator	Net Adjusted Demand Reduction (kW)	-	-	6.3	5.1	11.3



VA - Residential Efficient Products Marketplace Program			2019	2020	2021	2022	2019-2022
Measures							
	A-Line	Total Participants	1,791,456	44,650	2,608,133	3,091,977	7,536,215
Installed kWh/year	A-Line	Total Gross Energy Savings (kWh/yr)	46,641,938	1,191,359	67,048,342	80,132,242	195,013,881
	A-Line	Net Adjusted Savings (kWh/yr)	32,649,357	714,815	34,865,138	41,668,766	109,898,075
Installed Summer peak kW	A-Line	Total Gross Demand Reduction (kW)	4,267.0	109.0	6,133.9	7,330.9	17,840.9
	A-Line	Net Adjusted Demand Reduction (kW)	2,986.9	65.4	3,189.6	3,812.1	10,054.0
Installed Winter peak kW	A-Line	Total Gross Demand Reduction (kW)	-	-	13,113.9	15,673.0	28,786.9
	A-Line	Net Adjusted Demand Reduction (kW)	-	-	6,819.2	8,149.9	14,969.2
		ENERGY STAR Air Purifier					
		Total Participants	0	692	1,593	1,438	3,723
Installed kWh/year		Total Gross Energy Savings (kWh/yr)	0	500,392	354,107	283,688	1,138,187
		Net Adjusted Savings (kWh/yr)	0	345,270	191,218	153,192	689,680
Installed Summer peak kW		Total Gross Demand Reduction (kW)	0.0	57.4	40.6	32.5	130.6
		Net Adjusted Demand Reduction (kW)	0.0	39.6	21.9	17.6	79.1
Installed Winter peak kW		Total Gross Demand Reduction (kW)	-	-	40.6	32.5	73.2
		Net Adjusted Demand Reduction (kW)	-	-	21.9	17.6	39.5
		ENERGY STAR Clothes Dryer					
		Total Participants	0	4,580	5,545	4,365	14,490
Installed kWh/year		Total Gross Energy Savings (kWh/yr)	0	800,174	968,473	761,396	2,530,043
		Net Adjusted Savings (kWh/yr)	0	336,073	368,020	289,330	993,423
Installed Summer peak kW		Total Gross Demand Reduction (kW)	0.0	80.0	96.8	76.1	253.0
		Net Adjusted Demand Reduction (kW)	0.0	33.6	36.8	28.9	99.3
Installed Winter peak kW		Total Gross Demand Reduction (kW)	-	-	46.8	36.8	83.5
		Net Adjusted Demand Reduction (kW)	-	-	17.8	14.0	31.7
		ENERGY STAR Clothes Washer					
		Total Participants	0	6,200	6,840	5,195	18,235
Installed kWh/year		Total Gross Energy Savings (kWh/yr)	0	1,119,626	1,304,609	1,027,633	3,451,868
		Net Adjusted Savings (kWh/yr)	0	492,635	417,475	328,843	1,238,953
Installed Summer peak kW		Total Gross Demand Reduction (kW)	0.0	122.5	142.8	112.5	377.8
		Net Adjusted Demand Reduction (kW)	0.0	53.9	45.7	36.0	135.6
Installed Winter peak kW		Total Gross Demand Reduction (kW)	-	-	68.9	54.3	123.2
		Net Adjusted Demand Reduction (kW)	-	-	22.1	17.4	39.4

O.1.4 2019-2022 Virginia Residential Efficient Products Marketplace Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
REEC	Not available	17.065919	25	69%	Not Available	Not Available
REEC	Schedule 1P	180.813895	25	736%	31,142	1%
REEC	Schedule 27	55.336717	25	225%	Not Available	Not Available
REEC	Schedule DP-R	154.682068	25	629%	12,007	1%
REEC	Schedule 1EV	64.070792	25	261%	18,438	0%
REEC	Schedule 1	17.064276	25	69%	12,661	0%
REEC	Schedule 1T	46.265328	25	188%	17,981	0%
REEC	Schedule 1G	48.740784	25	198%	12,098	0%
REEC	Schedule 1S	47.315579	25	192%	27,221	0%



O.1.5 2019-2022 Virginia Residential Efficient Products Marketplace Program
Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Efficient Products Marketplace	2018	VA	PUR-2018-00168	11.41	4.43	3.49	0.34
Residential Efficient Products Marketplace	2019	VA	PUR-2019-00201	N/A	N/A	N/A	N/A
Residential Efficient Products Marketplace	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Efficient Products Marketplace	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Efficient Products Marketplace	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Residential Efficient Products Marketplace	2023	VA	EM&V Report	++	15.83	18.74	0.27



O.2 Virginia Residential Electric Vehicle Energy Efficiency and Demand Response Program 2020–2022

O.2.1 2020–2022 Virginia Residential Electric Vehicle Energy Efficiency and Demand Response Program Annual Indicator Tables

VA - Residential Electric Vehicle Energy Efficiency and Demand Response Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$620	\$13,241	\$11,573	\$25,433
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$14,517	\$282,385	\$277,166	\$574,068
Costs (\$)		Planned	\$0	\$349,322	\$385,915	\$735,236
Costs (\$)		Variance	\$14,517	-\$66,937	-\$108,749	-\$161,169
		Annual % of Planned	N/A	81%	72%	78%
Participants ¹		Total (Gross)	0	93	206	299
		Planned	0	550	748	1,298
		Variance	0	-457	-542	-999
		Annual % of Planned (Gross)	N/A	17%	28%	23%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	12,379	27,255	39,634
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	12,379	27,255	39,634
		Net-To-Gross Rate Weighted by Measure	N/A	80%	80%	80%
		Net-To-Gross Adjustment (kWh/yr)	0	-2,476	-5,451	-7,927
		Net Adjusted Savings (kWh/yr)	0	9,903	21,804	31,707
		Planned Net Savings (kWh/yr)	0	206,534	280,887	487,421
		Annual % Toward Planned Net Savings	N/A	4.79%	7.76%	6.51%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	133	132	133
		Avg. Net Savings Per Participant (kWh/yr)	N/A	106	106	106
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	21.4	29.1	50.6
		Annual % Toward Planned Net Reduction	N/A	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.0	0.0	0.0
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.0	0.0	0.0
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
		Realization Rate Weighted by Measure	-	-	-	N/A
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
		Planned Net Savings (kW)	-	7.1	9.7	16.9
		Annual % Toward Planned Net Reduction	-	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-
Measures						
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$149	\$85	\$85
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$1	\$1	\$1
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	48.3%	14.3%	14.9%	14.9%
		Cum. \$Rebate per Participant (Gross)	N/A	\$125	\$125	\$125



O.2.2 2022 Virginia Residential Electric Vehicle Energy Efficiency and Demand Response Program Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2020-2022 Total		
VA - Residential Electric Vehicle Energy Efficiency and Demand Response Program	Measure	Direct Rebate																
		O&M (\$)	\$5,284	\$14,037	\$7,708	\$6,434	\$5,984	\$10,148	\$3,579	\$20,769	\$7,151	\$197,899	\$12,498	\$10,680	\$12,498	\$11,573	\$25,433	
		O&M (\$)	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$32,160	\$774,166
		O&M (\$)	-\$26,876	-\$16,722	-\$24,451	-\$25,725	-\$26,196	-\$22,072	-\$28,580	-\$17,361	-\$25,008	-\$165,740	-\$44,658	-\$21,489	-\$108,749	-\$161,169	-\$161,169	\$735,238
		Capital (\$)																
		Costs (\$)																
		Costs (\$)																
		Planned																
		Variance																
		Annual % of Planned																
Participants ¹	Measure	Total (Gross)	22	0	15	17	14	25	15	21	19	15	20	23	206	299		
		Planned	66	62	62	62	62	62	62	62	62	62	62	62	62	748	1,298	
		Variance	-44	-62	-47	-45	-48	-37	-47	-41	-43	-47	-42	-42	-39	-542	-999	
		Annual % of Planned (Gross)	3%	3%	5%	7%	9%	12%	14%	17%	20%	22%	24%	28%	28%	23%	23%	
		Total Gross Energy Savings (kWh/yr)	2,824	0	1,988	2,258	1,857	3,323	1,995	2,788	2,521	1,991	2,659	3,051	2,755	27,255	38,634	
		Realization Rate Weighted by Measure	100%	N/A	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
		Realization Rate Adjustment (kWh/yr)	2,824	0	1,988	2,258	1,857	3,323	1,995	2,788	2,521	1,991	2,659	3,051	2,755	27,255	38,634	
		Net-To-Gross Rate Weighted by Measure	80%	N/A	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	
		Net-To-Gross Adjustment (kWh/yr)	-565	0	-398	-452	-371	-665	-399	-558	-504	-398	-532	-610	-541	-7,927	-7,927	
		Net Adjusted Savings (kWh/yr)	2,259	0	1,591	1,806	1,486	2,658	1,596	2,230	2,017	1,593	2,127	2,441	2,184	21,804	31,707	
Planned Net Savings (kWh/yr)	24,784	23,282	23,282	23,282	23,282	23,282	23,282	23,282	23,282	23,282	23,282	23,282	23,282	280,887	487,421			
Annual % Toward Planned Net Savings	0.80%	0.80%	1.37%	2.01%	2.54%	3.49%	4.06%	5.57%	6.14%	6.89%	7.76%	8.13%	9.33%	133	133			
Avg. Gross Savings Per Participant (kWh/yr)	128	N/A	133	133	133	133	133	133	133	133	133	133	133	133	133			
Avg. Net Savings Per Participant (kWh/yr)	103	N/A	106	106	106	106	106	106	106	106	106	106	106	106	106			
Installed Summer peak kW	Measure	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Planned Net Savings (kW)	2.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	29.1	50.6	
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
		Avg. Gross Demand Reduction Per Participant (kW)	0.0	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Avg. Net Demand Reduction Per Participant (kW)	0.0	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Installed Winter peak kW	Measure	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		Planned Net Savings (kW)	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	9.7	16.9	
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
		Avg. Gross Demand Reduction Per Participant (kW)	0.0	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Avg. Net Demand Reduction Per Participant (kW)	0.0	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Measures	Measure	Cum. Admin. per Participant (Gross)	\$122	\$128	\$115	\$104	\$96	\$80	\$80	\$76	\$72	\$100	\$91	\$85	\$85	\$85		
		Cum. Admin. per kWh/yr (Gross)	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1		
		Cum. Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$EM&V per \$1 Total	14.1%	15.1%	16.9%	16.4%	17.0%	16.8%	20.1%	20.5%	14.0%	15.2%	14.9%	14.9%	14.9%	14.9%		
		Cum. Rebate per Participant (Gross)	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125		



O.2.3 2020–2022 Virginia Residential Electric Vehicle Energy Efficiency and Demand Response Program Measure Indicator Tables

VA - Residential Electric Vehicle Energy Efficiency and Demand Response Program		2020	2021	2022	2020-2022
Measures					
ENERGY STAR EV Charger	Total Participants	0	93	206	299
ENERGY STAR EV Charger	Total Gross Energy Savings (kWh/yr)	0	12,379	27,255	39,634
ENERGY STAR EV Charger	Net Adjusted Savings (kWh/yr)	0	9,903	21,804	31,707
ENERGY STAR EV Charger	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
ENERGY STAR EV Charger	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
ENERGY STAR EV Charger	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
ENERGY STAR EV Charger	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0

O.2.4 2020–2022 Virginia Residential Electric Vehicle Energy Efficiency and Demand Response Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
REVEE	Not available	106.042816	376	28%	Not Available	Not Available
REVEE	Schedule 1G	103.869968	376	28%	12,098	1%
REVEE	Schedule 1S	106.809329	376	28%	27,221	0%
REVEE	Schedule 1	106.095188	376	28%	12,661	1%
REVEE	Schedule 1EV	106.809329	376	28%	18,438	1%



O.2.5 2020–2022 Virginia Residential Electric Vehicle Energy Efficiency and Demand Response Program
Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Electric Vehicle Energy Efficiency and Demand Response	2019	VA	PUR-2019-00201	1.62	1.36	1.37	0.95
Residential Electric Vehicle Energy Efficiency and Demand Response	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Electric Vehicle Energy Efficiency and Demand Response	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Electric Vehicle Energy Efficiency and Demand Response	2022	VA	PUR-2022-00210	1.51	0.67	0.37	0.28
Residential Electric Vehicle Energy Efficiency and Demand Response	2023	VA	EM&V Report	0.66	0.11	0.06	0.08



O.3 Virginia Residential Energy Efficiency Kits Program 2020–2022

O.3.1 2020–2022 Virginia Residential Energy Efficiency Kits Program Annual Indicator Tables

VA - Residential Kits Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$1,541	\$61,802	\$51,451	\$114,794
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$36,118	\$1,318,034	\$1,232,247	\$2,586,398
Costs (\$)		Planned	\$0	\$1,950,228	\$1,925,785	\$3,876,013
Costs (\$)		Variance	\$36,118	-\$632,193	-\$693,539	-\$1,289,615
		Annual % of Planned	N/A	68%	64%	67%
Participants ¹		Total (Gross)	0	28,113	26,790	54,903
		Planned	0	28,200	28,200	56,400
		Variance	0	-87	-1,410	-1,497
		Annual % of Planned (Gross)	N/A	100%	95%	97%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	3,442,999	3,439,997	6,882,996
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	3,442,999	3,439,997	6,882,996
		Net-To-Gross Rate Weighted by Measure	N/A	60%	60%	60%
		Net-To-Gross Adjustment (kWh/yr)	0	-1,377,200	-1,375,999	-2,753,198
		Net Adjusted Savings (kWh/yr)	0	2,065,800	2,063,998	4,129,798
		Planned Net Savings (kWh/yr)	0	7,459,378	7,459,378	14,918,756
		Annual % Toward Planned Net Savings	N/A	27.7%	27.7%	27.7%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	122	128	125
		Avg. Net Savings Per Participant (kWh/yr)	N/A	73	77	75
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	302.3	301.4	603.7
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	302.3	301.4	603.7
		Net-To-Gross Rate Weighted by Measure	N/A	60%	60%	60%
		Net-To-Gross Adjustment (kW)	0.0	-120.9	-120.6	-241.5
		Net Adjusted Demand Reduction (kW)	0.0	181.4	180.8	362.2
		Planned Net Savings (kW)	0.0	661.7	661.7	1,323.5
		Annual % Toward Planned Net Reduction	N/A	27.4%	27.3%	27.4%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.01	0.01	0.01
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.01	0.01	0.01
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	335.0	332.5	667.4
		Realization Rate Weighted by Measure	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	335.0	332.5	667.4
		Net-To-Gross Rate Weighted by Measure	-	60%	60%	60%
		Net-To-Gross Adjustment (kW)	-	-134.0	-133.0	-267.0
		Net Adjusted Demand Reduction (kW)	-	201.0	199.5	400.5
		Planned Net Savings (kW)	0.0	653.5	653.5	1,306.9
		Annual % Toward Planned Net Reduction	-	30.8%	30.5%	30.6%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.01	0.01	0.01
		Avg. Net Demand Reduction Per Participant (kW)	-	0.01	0.01	0.01
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$2	\$2	\$2
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.02	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	N/A	\$210	\$190	\$190
		Cum. \$EM&V per \$Total	92.2%	11.2%	10.4%	10.4%
		Cum. \$Rebate per Participant (Gross)	N/A	\$30	\$30	\$30



O.3.2 2022 Virginia Residential Energy Efficiency Kits Program Monthly Indicator Tables

VA - Residential Kits Program		2022												2020-2022	
Category	Measure	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total
O&M (\$)	Direct Rebate	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct EM&V	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital (\$)	\$939	\$1,761	\$8,032	\$1,573	\$1,018	\$9,000	\$7,508	\$2,592	\$8,440	\$1,576	\$8,925	\$1,086	\$0	\$51,451	\$114,794
Costs (\$)	\$22,483	\$42,184	\$192,376	\$37,663	\$24,392	\$191,587	\$179,828	\$62,075	\$202,129	\$37,762	\$213,757	\$26,011	\$26,011	\$1,232,247	\$2,856,398
Costs (\$)	\$160,482	\$160,482	\$160,482	\$160,482	\$160,482	\$160,482	\$160,482	\$160,482	\$160,482	\$160,482	\$160,482	\$160,482	\$160,482	\$1,925,785	\$3,876,013
Costs (\$)	-\$137,989	-\$118,298	\$31,894	-\$122,819	-\$136,091	\$31,115	\$19,345	-\$98,407	\$41,647	-\$122,730	\$53,275	-\$134,471	-\$134,471	-\$693,539	-\$1,289,615
Annual % of Planned	1.2%	3.4%	13.3%	15.3%	16.6%	26.5%	35.9%	39.1%	49.6%	51.5%	62.6%	64.0%	64.0%	64%	67%
Participants ¹	Total (Gross)	0	0	4,901	0	0	5,041	5,162	0	5,831	0	5,855	0	26,790	54,903
	Planned	2,350	2,350	2,350	2,350	2,350	2,350	2,350	2,350	2,350	2,350	2,350	2,350	28,200	56,400
	Variance	-2,350	-2,350	2,651	-2,350	-2,350	2,691	2,812	-2,350	3,481	-2,350	3,505	-2,350	-1,410	-1,487
	Annual % of Planned (Gross)	0%	0%	17%	17%	17%	35%	54%	54%	74%	74%	95%	95%	95%	97%
Installed kWh/year	Total	35,838	0	645,165	55,181	0	569,187	633,632	130,493	664,362	0	704,139	0	3,439,997	6,882,996
	Realization Rate Weighted by Measure	100%	N/A	100%	100%	N/A	100%	100%	100%	100%	N/A	100%	N/A	100%	100%
	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	35,838	0	645,165	55,181	0	569,187	633,632	130,493	664,362	0	704,139	0	3,439,997	6,882,996
	Net-To-Gross Rate Weighted by Measure	60%	N/A	60%	60%	N/A	60%	60%	60%	60%	N/A	60%	N/A	60%	60%
	Net-To-Gross Adjustment (kWh/yr)	-14,335	0	-295,666	-21,272	0	-227,675	-253,453	-52,197	-265,745	0	-281,656	0	-1,375,999	-2,751,198
	Net Adjusted Savings (kWh/yr)	21,503	0	349,499	33,909	0	341,512	380,179	78,296	398,617	0	422,484	0	2,063,998	4,128,798
	Planned Net Savings (kWh/yr)	62,161	62,161	62,161	62,161	62,161	62,161	62,161	62,161	62,161	62,161	62,161	62,161	62,161	7,459,378
	Annual % Toward Planned Net Savings	0.29%	0.29%	5.1%	5.94%	5.94%	10.5%	15.6%	16.7%	22.0%	22.0%	27.7%	27.7%	27.7%	27.7%
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	132	N/A	N/A	113	123	N/A	114	N/A	120	N/A	N/A	128
Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	79	N/A	N/A	68	74	N/A	68	N/A	72	N/A	N/A	77	
Installed Summer peak kW	Total	3.5	0.0	56.7	4.5	0.0	50.1	55.4	10.8	55.5	0.0	61.8	0.0	301.4	603.7
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	3.5	0.0	56.7	4.5	0.0	50.1	55.4	10.8	55.5	0.0	61.8	0.0	301.4	603.7
	Net-To-Gross Rate Weighted by Measure	60%	100%	60%	60%	100%	60%	60%	60%	60%	100%	60%	100%	60%	60%
	Net-To-Gross Adjustment (kW)	-1.4	0.0	-22.7	-1.8	0.0	-20.1	-22.2	-4.3	-23.4	0.0	-24.7	0.0	-120.6	-241.5
	Net Adjusted Demand Reduction (kW)	2.1	0.0	34.0	2.7	0.0	30.1	33.3	6.5	35.1	0.0	37.1	0.0	180.8	362.2
	Planned Net Savings (kW)	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1	661.7
	Annual % Toward Planned Net Reduction	0.32%	0.32%	5.46%	5.87%	5.87%	10.4%	15.4%	16.4%	21.7%	21.7%	27.3%	27.3%	27.3%	27.3%
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	0.01	N/A	N/A	0.01	0.01	N/A	0.01	N/A	0.01	N/A	N/A	0.01
Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	0.01	N/A	N/A	0.01	0.01	N/A	0.01	N/A	0.01	N/A	N/A	0.01	
Installed Winter peak kW	Total	7.6	0.0	62.2	8.5	0.0	50.5	58.9	20.5	59.3	0.0	65.0	0.0	332.5	667.4
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	7.6	0.0	62.2	8.5	0.0	50.5	58.9	20.5	59.3	0.0	65.0	0.0	332.5	667.4
	Net-To-Gross Rate Weighted by Measure	60%	100%	60%	60%	100%	60%	60%	60%	60%	100%	60%	100%	60%	60%
	Net-To-Gross Adjustment (kW)	-3.0	0.0	-24.9	-3.4	0.0	-20.2	-23.6	-8.2	-23.7	0.0	-26.0	0.0	-133.0	-267.0
	Net Adjusted Demand Reduction (kW)	4.5	0.0	37.3	5.1	0.0	30.3	35.3	12.3	35.6	0.0	39.0	0.0	199.5	400.5
	Planned Net Savings (kW)	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	653.5
	Annual % Toward Planned Net Reduction	0.69%	0.69%	6.41%	7.19%	7.19%	11.8%	17.2%	19.1%	24.6%	24.6%	30.5%	30.5%	30.5%	30.6%
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	0.01	N/A	N/A	0.01	0.01	N/A	0.01	N/A	0.01	N/A	N/A	0.01
Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	0.01	N/A	N/A	0.01	0.01	N/A	0.01	N/A	0.01	N/A	N/A	0.01	
Program Performance	Cum. \$Admin. per Participant (Gross)	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
	Cum. \$Admin. per kWh/year (Gross)	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02
	Cum. \$Admin. per kW (Gross)	\$210	\$216	\$204	\$206	\$209	\$203	\$195	\$196	\$190	\$193	\$188	\$190	\$190	\$190
	Cum. \$EM&V per \$Total	11.0%	12.3%	11.4%	11.9%	12.2%	11.6%	10.6%	10.9%	10.8%	10.9%	10.5%	10.4%	10.4%	10.4%
	Cum. \$Rebate per Participant (Gross)	\$30	\$30	\$30	\$31	\$31	\$30	\$32	\$31	\$30	\$30	\$30	\$30	\$30	\$30



O.3.3 2020–2022 Virginia Residential Energy Efficiency Kits Program Measure Indicator Tables

VA - Residential Kits Program			2020	2021	2022	2020-2022
Measures						
	Window Weatherstripping	Total Participants	0	259	413	672
Installed kWh/year	Window Weatherstripping	Total Gross Energy Savings (kWh/yr)	0	3,635	921	4,556
	Window Weatherstripping	Net Adjusted Savings (kWh/yr)	0	2,181	553	2,733
Installed Summer peak kW	Window Weatherstripping	Total Gross Demand Reduction (kW)	0.0	0.1	0.2	0.3
	Window Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.1	0.2
Installed Winter peak kW	Window Weatherstripping	Total Gross Demand Reduction (kW)	-	4.6	0.9	5.6
	Window Weatherstripping	Net Adjusted Demand Reduction (kW)	-	2.8	0.6	3.3

VA - Residential Kits Program			2020	2021	2022	2020-2022
Measures						
	Lighting	Total Participants	0	334	511	845
Installed kWh/year	Lighting	Total Gross Energy Savings (kWh/yr)	0	115,378	155,732	271,110
	Lighting	Net Adjusted Savings (kWh/yr)	0	69,227	93,439	162,666
Installed Summer peak kW	Lighting	Total Gross Demand Reduction (kW)	0.0	10.6	14.2	24.8
	Lighting	Net Adjusted Demand Reduction (kW)	0.0	6.3	8.5	14.9
Installed Winter peak kW	Lighting	Total Gross Demand Reduction (kW)	-	22.6	30.5	53.0
	Lighting	Net Adjusted Demand Reduction (kW)	-	13.5	18.3	31.8
	Outlet/Switch Gaskets	Total Participants	0	259	413	672
Installed kWh/year	Outlet/Switch Gaskets	Total Gross Energy Savings (kWh/yr)	0	483	720	1,202
	Outlet/Switch Gaskets	Net Adjusted Savings (kWh/yr)	0	290	432	721
Installed Summer peak kW	Outlet/Switch Gaskets	Total Gross Demand Reduction (kW)	0.0	0.1	0.1	0.2
	Outlet/Switch Gaskets	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.1	0.1
Installed Winter peak kW	Outlet/Switch Gaskets	Total Gross Demand Reduction (kW)	-	0.5	0.7	1.2
	Outlet/Switch Gaskets	Net Adjusted Demand Reduction (kW)	-	0.3	0.4	0.7
	Smart Strips	Total Participants	0	28,113	26,790	54,903
Installed kWh/year	Smart Strips	Total Gross Energy Savings (kWh/yr)	0	3,155,684	3,036,988	6,192,672
	Smart Strips	Net Adjusted Savings (kWh/yr)	0	1,893,411	1,822,193	3,715,603
Installed Summer peak kW	Smart Strips	Total Gross Demand Reduction (kW)	0.0	277.8	267.3	545.1
	Smart Strips	Net Adjusted Demand Reduction (kW)	0.0	166.7	160.4	327.0
Installed Winter peak kW	Smart Strips	Total Gross Demand Reduction (kW)	-	277.8	267.3	545.1
	Smart Strips	Net Adjusted Demand Reduction (kW)	-	166.7	160.4	327.0
	Water Distribution	Total Participants	0	251	402	653
Installed kWh/year	Water Distribution	Total Gross Energy Savings (kWh/yr)	0	91,129	158,816	249,945
	Water Distribution	Net Adjusted Savings (kWh/yr)	0	54,677	95,290	149,967
Installed Summer peak kW	Water Distribution	Total Gross Demand Reduction (kW)	0.0	4.5	8.1	12.6
	Water Distribution	Net Adjusted Demand Reduction (kW)	0.0	2.7	4.9	7.6
Installed Winter peak kW	Water Distribution	Total Gross Demand Reduction (kW)	-	4.5	8.1	12.6
	Water Distribution	Net Adjusted Demand Reduction (kW)	-	2.7	4.9	7.6



VA - Residential Kits Program			2020	2021	2022	2020-2022
Measures						
	Caulking per Tube	Total Participants	0	259	413	672
Installed kWh/year	Caulking per Tube	Total Gross Energy Savings (kWh/yr)	0	1,239	1,842	3,080
	Caulking per Tube	Net Adjusted Savings (kWh/yr)	0	743	1,105	1,848
Installed Summer peak kW	Caulking per Tube	Total Gross Demand Reduction (kW)	0.0	0.3	0.4	0.6
	Caulking per Tube	Net Adjusted Demand Reduction (kW)	0.0	0.2	0.2	0.4
Installed Winter peak kW	Caulking per Tube	Total Gross Demand Reduction (kW)	-	1.3	1.9	3.1
	Caulking per Tube	Net Adjusted Demand Reduction (kW)	-	0.8	1.1	1.9
	Door Sweep	Total Participants	0	259	413	672
Installed kWh/year	Door Sweep	Total Gross Energy Savings (kWh/yr)	0	9,301	13,840	23,141
	Door Sweep	Net Adjusted Savings (kWh/yr)	0	5,580	8,304	13,885
Installed Summer peak kW	Door Sweep	Total Gross Demand Reduction (kW)	0.0	2.0	2.8	4.8
	Door Sweep	Net Adjusted Demand Reduction (kW)	0.0	1.2	1.7	2.9
Installed Winter peak kW	Door Sweep	Total Gross Demand Reduction (kW)	-	9.4	14.1	23.5
	Door Sweep	Net Adjusted Demand Reduction (kW)	-	5.7	8.4	14.1
	Door Weatherstripping	Total Participants	0	259	413	672
Installed kWh/year	Door Weatherstripping	Total Gross Energy Savings (kWh/yr)	0	5,757	921	6,678
	Door Weatherstripping	Net Adjusted Savings (kWh/yr)	0	3,454	553	4,007
Installed Summer peak kW	Door Weatherstripping	Total Gross Demand Reduction (kW)	0.0	0.1	0.2	0.3
	Door Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.1	0.2
Installed Winter peak kW	Door Weatherstripping	Total Gross Demand Reduction (kW)	-	7.5	0.9	8.4
	Door Weatherstripping	Net Adjusted Demand Reduction (kW)	-	4.5	0.6	5.0
	Hot Water Pipe Insulation	Total Participants	0	251	402	653
Installed kWh/year	Hot Water Pipe Insulation	Total Gross Energy Savings (kWh/yr)	0	60,395	70,217	130,612
	Hot Water Pipe Insulation	Net Adjusted Savings (kWh/yr)	0	36,237	42,130	78,367
Installed Summer peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	0.0	6.9	8.0	14.9
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.0	4.1	4.8	8.9
Installed Winter peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	-	6.9	8.0	14.9
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	-	4.1	4.8	8.9



O.3.4 2020–2022 Virginia Residential Energy Efficiency Kits Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RKTS	Not available	75.21989	660	11%	Not Available	Not Available
RKTS	Schedule 1G	124.393848	660	19%	12,098	1%
RKTS	Schedule 1S	82.153493	660	12%	27,221	0%
RKTS	Not Available	67.35	660	10%	Not Available	Not Available
RKTS	Schedule 24	67.35	660	10%	Not Available	Not Available
RKTS	Schedule GS-1	67.35	660	10%	18,532	0%
RKTS	Schedule 1T	67.35	660	10%	17,981	0%
RKTS	Schedule 100	67.35	660	10%	Not Available	Not Available
RKTS	Schedule 27	67.35	660	10%	Not Available	Not Available
RKTS	Schedule 1	75.064455	660	11%	12,661	1%

O.3.5 2020–2022 Virginia Residential Energy Efficiency Kits Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Kits	2019	VA	PUR-2019-00201	278.91	1.8	8	0.34
Residential Kits	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Kits	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Kits	2022	VA	PUR-2022-00210	133.13	0.45	2.02	0.18
Residential Kits	2023	VA	EM&V Report	++	0.45	2.03	0.17



O.4 Virginia Residential Smart Thermostat Purchase and WeatherSmart Program 2020–2022

O.4.1 2020–2022 Virginia Residential Smart Thermostat Purchase and WeatherSmart Program Annual Indicator Tables

VA - Residential Thermostat Purchase and WeatherSmart Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$4,253	\$47,014	\$47,874	\$99,141
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$99,671	\$1,002,656	\$1,146,575	\$2,248,903
Costs (\$)		Planned	\$0	\$1,176,343	\$1,191,322	\$2,367,665
Costs (\$)		Variance	\$99,671	-\$173,686	-\$44,747	-\$118,762
		Annual % of Planned	N/A	85%	96%	95%
Participants ¹		Total (Gross)	0	5,321	7,636	12,957
		Planned	0	4,791	9,233	14,024
		Variance	0	530	-1,597	-1,067
		Annual % of Planned (Gross)	N/A	111%	83%	92%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	1,399,012	1,875,496	3,274,508
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	1,399,012	1,875,496	3,274,508
		Net-To-Gross Rate Weighted by Measure	N/A	82%	82%	82%
		Net-To-Gross Adjustment (kWh/yr)	0	-250,884	-334,604	-585,488
		Net Adjusted Savings (kWh/yr)	0	1,148,128	1,540,892	2,689,020
		Planned Net Savings (kWh/yr)	0	1,815,858	3,484,138	5,299,995
		Annual % Toward Planned Net Savings	N/A	63.2%	44.2%	50.7%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	263	246	253
		Avg. Net Savings Per Participant (kWh/yr)	N/A	216	202	208
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	212.4	287.1	499.5
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	212.4	287.1	499.5
		Net-To-Gross Rate Weighted by Measure	N/A	95%	95%	95%
		Net-To-Gross Adjustment (kW)	0.0	-10.6	-14.4	-25.0
		Net Adjusted Demand Reduction (kW)	0.0	201.8	272.7	474.6
		Planned Net Savings (kW)	0.0	197.7	381.0	578.7
		Annual % Toward Planned Net Reduction	N/A	102.1%	71.6%	82.0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.04	0.04	0.04
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.04	0.04	0.04
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	28.5	42.7	71.2
		Realization Rate Weighted by Measure	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	28.5	42.7	71.2
		Net-To-Gross Rate Weighted by Measure	-	95%	95%	95%
		Net-To-Gross Adjustment (kW)	-	-1.4	-2.1	-3.6
		Net Adjusted Demand Reduction (kW)	-	27.1	40.6	67.6
		Planned Net Savings (kW)	0.0	479.3	923.7	1,403.0
		Annual % Toward Planned Net Reduction	-	5.65%	4.39%	4.82%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.01	0.01	0.01
		Avg. Net Demand Reduction Per Participant (kW)	-	0.01	0.01	0.01
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$10	\$8	\$8
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.04	\$0.03	\$0.03
		Cum. \$Admin. per kW (Gross)	N/A	\$241	\$198	\$198
		Cum. \$EM&V per \$Total	31.0%	15.3%	13.1%	13.1%
		Cum. \$Rebate per Participant (Gross)	N/A	\$72	\$68	\$68



O.4.2 2022 Virginia Residential Smart Thermostat Purchase and WeatherSmart Program Monthly Indicator Tables

VA - Residential Thermostat Purchase and WeatherSmart Program	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2020-2022
Category	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	Total	Total	Total
Measure																	
Indicator																	
Direct Rebate	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Direct EM&V	\$4,163	\$4,146	\$3,469	\$3,794	\$3,863	\$4,292	\$4,221	\$5,915	\$4,394	\$4,217	\$2,893	\$2,487	\$47,874	\$47,874	\$0	\$0	\$89,141
Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	\$99,702	\$99,286	\$83,072	\$90,877	\$93,253	\$102,797	\$101,101	\$141,670	\$104,985	\$100,991	\$99,299	\$99,582	\$1,146,575	\$2,248,903	\$0	\$0	\$2,248,903
Costs (\$)	\$99,277	\$99,277	\$99,277	\$99,277	\$99,277	\$99,277	\$99,277	\$99,277	\$99,277	\$99,277	\$99,277	\$99,277	\$1,191,322	\$2,367,665	\$0	\$0	\$2,367,665
Costs (\$)	\$425	\$9	\$16,205	\$8,400	\$6,043	\$3,520	\$1,824	\$42,393	\$5,708	\$1,714	\$29,978	\$39,715	\$44,747	\$118,762	\$0	\$0	\$118,762
Annual % of Planned	8.4%	16.7%	23.7%	31.3%	39.1%	47.8%	56.2%	68.1%	77.0%	85.4%	91.2%	96.2%	96%	95%	95%	95%	95%
Participants*	592	471	585	1,020	811	568	654	740	598	560	523	514	7,636	12,957	0	0	12,957
Planned	774	769	769	769	769	769	769	769	769	769	769	769	9,233	14,024	0	0	14,024
Variance	-182	-298	-184	-251	-42	-201	-115	-28	-171	-209	-246	-255	-1,597	-1,067	0	0	-1,067
Annual % of Planned (Gross)	6%	12%	16%	29%	38%	44%	51%	59%	65%	71%	77%	83%	83%	82%	83%	83%	82%
Installed kWh/year	177,377	125,113	139,333	190,828	165,474	135,994	174,140	197,621	143,768	154,684	141,046	130,117	1,875,496	3,274,508	0	0	3,274,508
Total Gross Energy Savings (kWh/yr)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realization Rate Weighted by Measure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Realization Rate Adjustment (kWh/yr)	177,377	125,113	139,333	190,828	165,474	135,994	174,140	197,621	143,768	154,684	141,046	130,117	1,875,496	3,274,508	0	0	3,274,508
Net-To-Gross Rate Adjusted Savings (kWh/yr)	80%	80%	83%	87%	85%	82%	81%	80%	82%	81%	82%	82%	82%	82%	82%	82%	82%
Net-To-Gross Rate Weighted by Measure	-35,517	-25,083	-23,663	-24,604	-24,913	-24,225	-33,154	-38,630	-25,298	-29,737	-26,096	-23,724	-334,604	-585,488	0	0	-585,488
Net Adjusted Savings (kWh/yr)	141,860	100,030	115,670	166,224	140,562	111,769	140,985	158,990	118,510	124,948	114,951	106,393	1,540,892	2,689,020	0	0	2,689,020
Planned Net Savings (kWh/yr)	292,074	290,188	290,188	290,188	290,188	290,188	290,188	290,188	290,188	290,188	290,188	290,188	3,464,138	6,299,995	0	0	6,299,995
Annual % Toward Planned Net Savings	4.07%	6.94%	10.3%	15.0%	19.1%	22.3%	26.3%	34.3%	37.9%	41.2%	44.2%	44.2%	44.2%	44.2%	44.2%	44.2%	44.2%
Avg. Gross Savings Per Participant (kWh/yr)	300	266	238	187	204	239	266	267	240	276	270	253	246	253	246	246	253
Avg. Net Savings Per Participant (kWh/yr)	240	212	198	163	173	197	216	215	198	223	220	207	207	208	207	208	208
Installed Summer peak kW Total	-0.1	-0.5	29.9	97.5	60.1	20.9	10.9	6.0	23.9	8.1	15.1	15.3	287.1	499.5	0	0	499.5
Total Gross Demand Reduction (kW)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realization Rate Weighted by Measure	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Realization Rate Adjustment (kW)	-0.1	-0.5	29.9	97.5	60.1	20.9	10.9	6.0	23.9	8.1	15.1	15.3	287.1	499.5	0	0	499.5
Net-To-Gross Rate Adjusted Gross Demand Reduction (kW)	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Net-To-Gross Rate Weighted by Measure	-0.0	-0.0	-1.5	-4.9	-3.0	-1.0	-0.5	-0.3	-1.2	-0.4	-0.8	-0.8	-14.4	-25.0	0	0	-25.0
Net Adjusted Demand Reduction (kW)	-0.1	-0.4	28.4	92.6	57.1	19.9	10.3	5.7	22.7	7.7	14.4	14.8	272.7	474.6	0	0	474.6
Planned Net Savings (kW)	31.9	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	381.0	578.7	0	0	578.7
Annual % Toward Planned Net Reduction	-0.02%	-0.14%	7.33%	31.6%	46.6%	51.8%	54.5%	56.0%	62.0%	64.0%	67.8%	71.6%	71.6%	82.0%	0.0	0.0	82.0%
Avg. Gross Demand Reduction Per Participant (kW)	0.00	0.00	0.05	0.10	0.07	0.04	0.02	0.01	0.04	0.01	0.03	0.03	0.04	0.04	0.04	0.04	0.04
Avg. Net Demand Reduction Per Participant (kW)	0.00	0.00	0.05	0.09	0.07	0.03	0.02	0.01	0.04	0.01	0.03	0.03	0.04	0.04	0.04	0.04	0.04
Installed Winter peak kW Total	-0.1	-0.1	4.4	13.9	8.1	3.2	2.0	1.0	3.9	1.4	2.2	2.7	42.7	71.2	0	0	71.2
Total Gross Demand Reduction (kW)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realization Rate Weighted by Measure	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Realization Rate Adjustment (kW)	-0.1	-0.1	4.4	13.9	8.1	3.2	2.0	1.0	3.9	1.4	2.2	2.7	42.7	71.2	0	0	71.2
Net-To-Gross Rate Adjusted Gross Demand Reduction (kW)	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Net-To-Gross Rate Weighted by Measure	-0.0	-0.0	-0.2	-0.7	-0.4	-0.2	-0.1	-0.1	-0.3	-0.1	-0.1	-0.1	-2.1	-3.6	0	0	-3.6
Net Adjusted Demand Reduction (kW)	-0.1	-0.1	4.2	13.2	7.7	3.0	1.9	1.0	3.7	1.3	2.1	2.5	40.6	67.6	0	0	67.6
Planned Net Savings (kW)	77.4	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	923.7	1,403.0	0	0	1,403.0
Annual % Toward Planned Net Reduction	-0.01%	-0.02%	0.43%	1.87%	2.70%	3.03%	3.23%	3.74%	3.89%	4.12%	4.39%	4.39%	4.39%	4.82%	0.0	0.0	4.82%
Avg. Gross Demand Reduction Per Participant (kW)	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Avg. Net Demand Reduction Per Participant (kW)	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Program Performance	\$9	\$9	\$9	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8
Cum. \$Admin. per Participant (Gross)	\$0.04	\$0.04	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03
Cum. \$Admin. per kWh/year (Gross)	\$261	\$261	\$261	\$197	\$177	\$179	\$195	\$194	\$200	\$200	\$200	\$198	\$198	\$198	\$198	\$198	\$198
Cum. \$EM&V per kW (Gross)	14.0%	13.6%	13.4%	13.3%	13.0%	13.2%	13.4%	13.2%	13.4%	13.2%	13.5%	13.5%	13.1%	13.1%	13.1%	13.1%	13.1%
Cum. \$Rebate per Participant (Gross)	\$74	\$76	\$75	\$70	\$68	\$68	\$69	\$70	\$70	\$71	\$69	\$68	\$68	\$68	\$68	\$68	\$68



O.4.3 2020–2022 Virginia Residential Smart Thermostat Purchase and WeatherSmart Program Measure
Indicator Tables

VA - Residential Thermostat Purchase and WeatherSmart Program		2020	2021	2022	2020-2022
Measures					
	Smart Thermostat Purchase	0	3,854	5,695	9,549
Installed kWh/year	Smart Thermostat Purchase	0	1,206,225	1,605,528	2,811,753
	Smart Thermostat Purchase	0	964,980	1,284,422	2,249,402
Installed Summer peak kW	Smart Thermostat Purchase	0.0	0.0	0.0	0.0
	Smart Thermostat Purchase	0.0	0.0	0.0	0.0
Installed Winter peak kW	Smart Thermostat Purchase	-	0.0	0.0	0.0
	Smart Thermostat Purchase	-	0.0	0.0	0.0
	WeatherSmart	0	1,467	1,941	3,408
Installed kWh/year	WeatherSmart	0	192,788	269,968	462,755
	WeatherSmart	0	183,148	256,469	439,618
Installed Summer peak kW	WeatherSmart	0.0	212.4	287.1	499.5
	WeatherSmart	0.0	201.8	272.7	474.6
Installed Winter peak kW	WeatherSmart	-	28.5	42.7	71.2
	WeatherSmart	-	27.1	40.6	67.6



O.4.4 2020–2022 Virginia Residential Smart Thermostat Purchase and WeatherSmart Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RTEE	Not available	280.83757	1,394	20%	Not Available	Not Available
RTEE	Schedule 1T	711.771481	1,394	51%	17,981	4%
RTEE	Schedule 2T	577.059127	1,394	41%	Not Available	Not Available
RTEE	Schedule 1EV	714.478071	1,394	51%	18,438	4%
RTEE	Schedule 1G	253.125031	1,394	18%	12,098	2%
RTEE	Schedule 1S	381.428896	1,394	27%	27,221	1%
RTEE	Schedule 1P	0	1,394	0%	31,142	0%
RTEE	Schedule 1	282.090995	1,394	20%	12,661	2%
RTEE	Schedule DP-R	0	1,394	0%	12,007	0%



O.4.5 2020-2022 Virginia Residential Smart Thermostat Purchase and WeatherSmart Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Thermostat Purchase and WeatherSmart	2019	VA	PUR-2019-00201	5.97	1.13	1.05	0.35
Residential Thermostat Purchase and WeatherSmart	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Thermostat Purchase and WeatherSmart	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Thermostat Purchase and WeatherSmart	2022	VA	PUR-2022-00210	4.93	3.26	2.26	0.77
Residential Thermostat Purchase and WeatherSmart	2023	VA	EM&V Report	3.72	1.34	0.89	0.38



O.5 Virginia Residential Smart Home Program 2021-2022

O.5.1 2021-2022 Virginia Residential Smart Home Program Annual Indicator Tables

VA - Residential Smart Home Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$425	\$30,096	\$30,521
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$9,058	\$720,794	\$729,852
Costs (\$)		Planned	\$0	\$2,053,050	\$2,053,050
Costs (\$)		Variance	\$9,058	-\$1,332,256	-\$1,323,198
		Annual % of Planned	N/A	35%	36%
Participants ¹		Total (Gross)	0	15	15
		Planned	0	4,826	4,826
		Variance	0	-4,811	-4,811
		Annual % of Planned (Gross)	N/A	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	8,087	8,087
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	8,087	8,087
		Net-To-Gross Rate Weighted by Measure	N/A	85%	85%
		Net-To-Gross Adjustment (kWh/yr)	0	-1,213	-1,213
		Net Adjusted Savings (kWh/yr)	0	6,874	6,874
		Planned Net Savings (kWh/yr)	0	5,706,021	5,706,021
		Annual % Toward Planned Net Savings	N/A	0.12%	0.12%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	539	539
		Avg. Net Savings Per Participant (kWh/yr)	N/A	458	458
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.5	0.5
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.5	0.5
		Net-To-Gross Rate Weighted by Measure	N/A	85%	85%
		Net-To-Gross Adjustment (kW)	0.0	-0.1	-0.1
		Net Adjusted Demand Reduction (kW)	0.0	0.4	0.4
		Planned Net Savings (kW)	0.0	1,398.4	1,398.4
		Annual % Toward Planned Net Reduction	N/A	0.03%	0.03%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.04	0.04
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.03	0.03
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	2.9	2.9
		Realization Rate Weighted by Measure	-	-	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	2.9	2.9
		Net-To-Gross Rate Weighted by Measure	-	85%	85%
		Net-To-Gross Adjustment (kW)	-	-0.4	-0.4
		Net Adjusted Demand Reduction (kW)	-	2.4	2.4
		Planned Net Savings (kW)	-	854.2	854.2
		Annual % Toward Planned Net Reduction	-	0.29%	0.29%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.2	0.2
		Avg. Net Demand Reduction Per Participant (kW)	-	0.2	0.2
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$2,035	\$2,035
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$4	\$4
		Cum. \$Admin. per kW (Gross)	N/A	\$57,960	\$57,960
		Cum. \$EM&V per \$Total	49.0%	6.8%	6.8%
		Cum. \$Rebate per Participant (Gross)	N/A	\$57	\$57



O.5.2 2022 Virginia Residential Smart Home Program Monthly Indicator Tables

Category	Measure	Indicator	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2021-2022
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
VA - Residential Smart Home Program	Direct Rebate														
	Direct Implementation														
	O&M (\$)														
	Capital (\$)														
Costs (\$)	Total	\$54	\$345	\$242	\$168	\$13,008	\$2,809	\$2,205	\$2,416	\$2,161	\$2,363	\$2,703	\$1,621	\$30,096	\$30,521
	Planned	\$1,303	\$8,257	\$5,796	\$4,014	\$31,553	\$87,279	\$52,819	\$57,859	\$51,764	\$56,598	\$64,730	\$38,824	\$720,794	\$729,852
	Variance	\$175,473	\$175,473	\$175,473	\$175,473	\$175,473	\$175,473	\$175,473	\$164,948	\$164,948	\$164,948	\$164,948	\$164,948	\$2,053,050	\$2,053,050
	Annual % of Planned	0.1%	0.5%	0.7%	0.9%	16.1%	19.4%	22.0%	24.8%	27.3%	30.1%	33.2%	35.1%	35%	36%
Participants ¹	Total (Gross)	0	0	0	0	0	0	0	2	7	0	6	0	15	
	Planned	404	402	402	402	402	402	402	402	402	402	402	402	4,826	
	Variance	-404	-402	-402	-402	-402	-402	-402	-400	-395	-402	-396	-402	-4,811	
	Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	1,564	3,416	0	3,106	0	8,087	
	Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	100%	N/A	100%	N/A	100%	
	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	85%	85%	N/A	N/A	85%	
Net Adjusted Savings (kWh/yr)	Total	0	0	0	0	0	0	0	-235	-512	0	-466	0	-1,213	
	Planned Net Savings (kWh/yr)	477,669	475,305	475,305	475,305	475,305	475,305	475,305	475,305	475,305	475,305	475,305	475,305	5,706,021	
	Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0.02%	0.07%	0.12%	0.12%	0.12%		
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	782	488	N/A	518	N/A		
Installed Summer peak kW	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.0	0.5	
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	85%	85%	100%	85%	100%		
Installed Winter peak kW	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
	Realization Rate Weighted by Measure	117.1	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	1,398.4	
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00%	0.02%	0.03%	0.03%	0.03%		
	Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.04	0.03	N/A	0.04	N/A		
Program Performance	Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$10,836	\$2,648	\$2,911	\$1,927	\$2,035	\$2,035	
	Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$4	\$5	\$4	\$4	\$4		
	Cum. \$EM&V per \$Total	42.8%	58.5%	63.1%	59.1%	5.1%	4.5%	4.0%	4.9%	4.7%	5.4%	7.2%	6.8%		
	Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$85	\$73	\$73	\$57	\$57		



O.5.3 2021-2022 Virginia Residential Smart Home Program Measure Indicator Tables

VA - Residential Smart Home Program			2021	2022	2021-2022
Measures					
	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Total Participants	0	4	4
Installed kWh/year	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Total Gross Energy Savings (kWh/yr)	0	1,862	1,862
	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Net Adjusted Savings (kWh/yr)	0	1,582	1,582
Installed Summer peak kW	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Net Adjusted Demand Reduction (kW)	-	0.0	0.0



VA - Residential Smart Home Program			2021	2022	2021-2022
Measures					
	Connected 9.5W ENERGY STAR LED	Total Participants	0	15	15
Installed kWh/year	Connected 9.5W ENERGY STAR LED	Total Gross Energy Savings (kWh/yr)	0	10	10
	Connected 9.5W ENERGY STAR LED	Net Adjusted Savings (kWh/yr)	0	8	8
Installed Summer peak kW	Connected 9.5W ENERGY STAR LED	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Connected 9.5W ENERGY STAR LED	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Connected 9.5W ENERGY STAR LED	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Connected 9.5W ENERGY STAR LED	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Smart Home Energy Monitor (w/ solar option)	Total Participants	0	4	4
Installed kWh/year	Smart Home Energy Monitor (w/ solar option)	Total Gross Energy Savings (kWh/yr)	0	471	471
	Smart Home Energy Monitor (w/ solar option)	Net Adjusted Savings (kWh/yr)	0	400	400
Installed Summer peak kW	Smart Home Energy Monitor (w/ solar option)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Smart Home Energy Monitor (w/ solar option)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Smart Home Energy Monitor (w/ solar option)	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Smart Home Energy Monitor (w/ solar option)	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Smart Home Hub with Entry/Motion Sensor	Total Participants	0	15	15
Installed kWh/year	Smart Home Hub with Entry/Motion Sensor	Total Gross Energy Savings (kWh/yr)	0	693	693
	Smart Home Hub with Entry/Motion Sensor	Net Adjusted Savings (kWh/yr)	0	589	589
Installed Summer peak kW	Smart Home Hub with Entry/Motion Sensor	Total Gross Demand Reduction (kW)	0.0	0.1	0.1
	Smart Home Hub with Entry/Motion Sensor	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.1
Installed Winter peak kW	Smart Home Hub with Entry/Motion Sensor	Total Gross Demand Reduction (kW)	-	0.1	0.1
	Smart Home Hub with Entry/Motion Sensor	Net Adjusted Demand Reduction (kW)	-	0.1	0.1
	Smart Plugs	Total Participants	0	15	15
Installed kWh/year	Smart Plugs	Total Gross Energy Savings (kWh/yr)	0	5,051	5,051
	Smart Plugs	Net Adjusted Savings (kWh/yr)	0	4,294	4,294
Installed Summer peak kW	Smart Plugs	Total Gross Demand Reduction (kW)	0.0	0.4	0.4
	Smart Plugs	Net Adjusted Demand Reduction (kW)	0.0	0.4	0.4
Installed Winter peak kW	Smart Plugs	Total Gross Demand Reduction (kW)	-	2.8	2.8
	Smart Plugs	Net Adjusted Demand Reduction (kW)	-	2.4	2.4



O.5.4 2021-2022 Virginia Residential Smart Home Program Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	Average Net Impact Per Part	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RSMH	Not available	458.241422	1,394	33%	Not Available	Not Available
RSMH	Schedule 1	478.523998	1,394	34%	12,661	4%
RSMH	Schedule 1G	326.404673	1,394	23%	12,098	3%

O.5.5 2021-2022 Virginia Residential Smart Home Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Smart Home	2020	VA	PUR-2020-00274	3.94	2.25	1.42	0.39
Residential Smart Home	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Smart Home	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Residential Smart Home	2023	VA	EM&V Report	1.54	0.35	0.21	0.15



O.6 Virginia Residential Water Savings Program 2021-2022

O.6.1 2021-2022 Virginia Residential Water Savings Program Annual Indicator Tables

VA - Residential Water Savings Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$478	\$10,722	\$11,200
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$10,197	\$256,790	\$266,986
Costs (\$)		Planned	\$0	\$794,394	\$794,394
Costs (\$)		Variance	\$10,197	-\$537,605	-\$527,408
		Annual % of Planned	N/A	32%	34%
Participants ¹		Total (Gross)	0	62	62
		Planned	0	940	940
		Variance	0	-878	-878
		Annual % of Planned (Gross)	N/A	7%	7%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	97,694	97,694
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	97,694	97,694
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	-9,769	-9,769
		Net Adjusted Savings (kWh/yr)	0	87,925	87,925
		Planned Net Savings (kWh/yr)	0	1,850,202	1,850,202
		Annual % Toward Planned Net Savings	N/A	4.75%	4.75%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	1,576	1,576
		Avg. Net Savings Per Participant (kWh/yr)	N/A	1,418	1,418
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	12.3	12.3
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	12.3	12.3
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	-1.2	-1.2
		Net Adjusted Demand Reduction (kW)	0.0	11.0	11.0
		Planned Net Savings (kW)	0.0	440.6	440.6
		Annual % Toward Planned Net Reduction	N/A	2.50%	2.50%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.2	0.2
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.2	0.2
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	15.6	15.6
		Realization Rate Weighted by Measure	-	-	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	15.6	15.6
		Net-To-Gross Rate Weighted by Measure	-	90%	90%
		Net-To-Gross Adjustment (kW)	-	-1.6	-1.6
		Net Adjusted Demand Reduction (kW)	-	14.0	14.0
		Planned Net Savings (kW)	-	0.0	0.0
		Annual % Toward Planned Net Reduction	-	-	N/A
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.3	0.3
		Avg. Net Demand Reduction Per Participant (kW)	-	0.2	0.2
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$181	\$181
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	\$914	\$914
		Cum. \$EM&V per \$Total	45.6%	8.4%	8.4%
		Cum. \$Rebate per Participant (Gross)	N/A	\$307	\$307



O.6.2 2022 Virginia Residential Water Savings Program Monthly Indicator Tables

VA - Residential Water Savings Program Measure	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2021-2022 Total
Category	Indicator													
O&M (\$)	\$71	\$259	\$188	\$7	\$4,065	\$649	\$691	\$690	\$807	\$886	\$1,232	\$977	\$10,722	\$11,200
O&M (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	\$1,703	\$6,199	\$4,511	\$162	\$97,362	\$20,344	\$16,539	\$16,517	\$19,229	\$21,221	\$29,497	\$23,404	\$266,790	\$266,986
O&M (\$)	\$67,896	\$67,896	\$67,896	\$67,896	\$67,896	\$67,896	\$63,824	\$63,824	\$63,824	\$63,824	\$63,824	\$63,824	\$794,394	\$794,394
Capital (\$)	\$66,193	\$61,698	\$63,385	\$67,734	\$29,466	\$47,552	\$51,357	\$47,307	\$44,495	\$42,603	\$34,327	\$40,420	\$537,605	\$527,408
Costs (\$)	0.2%	1.0%	1.6%	1.6%	13.8%	16.4%	18.5%	20.6%	23.0%	25.7%	29.4%	32.3%	32%	34%
Costs (\$)	\$1,703	\$6,199	\$4,511	\$162	\$97,362	\$20,344	\$16,539	\$16,517	\$19,229	\$21,221	\$29,497	\$23,404	\$266,790	\$266,986
Costs (\$)	\$67,896	\$67,896	\$67,896	\$67,896	\$67,896	\$67,896	\$63,824	\$63,824	\$63,824	\$63,824	\$63,824	\$63,824	\$794,394	\$794,394
Costs (\$)	\$66,193	\$61,698	\$63,385	\$67,734	\$29,466	\$47,552	\$51,357	\$47,307	\$44,495	\$42,603	\$34,327	\$40,420	\$537,605	\$527,408
Annual % of Planned	0.2%	1.0%	1.6%	1.6%	13.8%	16.4%	18.5%	20.6%	23.0%	25.7%	29.4%	32.3%	32%	34%
Participants¹														
Total (Gross)	0	0	0	0	0	0	0	0	0	7	13	23	19	62
Planned	82	78	78	78	78	78	78	78	78	78	78	78	78	940
Variance	-82	-78	-78	-78	-78	-78	-78	-78	-78	-71	-65	-59	-878	-878
Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%	5%	7%	7%	7%
Installed kWh/year														
Total	0	0	0	0	0	0	0	0	12,848	17,395	37,044	30,407	97,694	97,694
Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	100%	100%	100%	100%	100%
Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Realization Rate Adjusted Savings (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12,848	17,395	37,044	30,407	97,694	97,694
Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	90%	90%	90%	90%	90%	90%
Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	-1,285	-1,739	-3,704	-3,041	-9,769	-9,769
Net Adjusted Savings (kWh/yr)	161,401	153,527	153,527	153,527	153,527	153,527	153,527	153,527	153,527	153,527	153,527	153,527	1,850,202	1,850,202
Planned Net Savings (kWh/yr)	0	0	0	0	0	0	0	0	11,563	15,655	33,340	27,366	87,925	87,925
Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0%	0.62%	1.47%	3.27%	4.75%	4.75%	4.75%
Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,858	1,611	1,600	1,576	1,576
Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,652	1,204	1,450	1,440	1,418	1,418
Installed Summer peak kW														
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.3	3.8	3.4	12.3	12.3
Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.3	3.8	3.4	12.3	12.3
Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	90%	90%	90%	90%	90%	90%
Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.3	-0.4	-0.3	-1.2	-1.2
Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.0	3.4	3.1	11.0	11.0
Planned Net Savings (kW)	38.4	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	440.6	440.6
Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0.35%	1.02%	1.80%	2.50%	2.50%	2.50%
Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.24	0.25	0.17	0.18	0.2	0.2
Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.2	0.2	0.1	0.2	0.2	0.2
Installed Winter peak kW														
Total	-	-	-	-	-	-	-	-	2.0	3.8	5.2	4.6	15.6	15.6
Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	100%	100%	100%	100%	100%	100%
Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0
Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	2.0	3.8	5.2	4.6	15.6	15.6
Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	90%	90%	90%	90%	90%	90%
Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-0.2	-0.4	-0.5	-0.5	-1.6	-1.6
Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	1.8	3.4	4.7	4.2	14.0	14.0
Planned Net Savings (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A	N/A
Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	0.3	0.3	0.2	0.2	0.3	0.3
Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	0.3	0.3	0.2	0.2	0.2	0.2
Measures														
Program Performance														
Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,158	\$450	\$238	\$181	\$181	\$181
Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1	\$0	\$0	\$0	\$0	\$0
Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$4,752	\$1,798	\$1,161	\$914	\$914	\$914
Cum. \$EM&V per \$Total	39.1%	52.4%	56.1%	56.2%	11.0%	9.4%	8.4%	8.2%	8.2%	8.2%	8.0%	9.2%	8.4%	8.4%
Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$279	\$308	\$303	\$307	\$307	\$307



O.6.3 2021-2022 Virginia Residential Water Savings Program Measure Indicator Tables

VA - Residential Water Savings Program			2021	2022	2021-2022
Measures					
	Pool Pump	Total Participants	0	20	20
Installed kWh/year	Pool Pump	Total Gross Energy Savings (kWh/yr)	0	38,042	38,042
	Pool Pump	Net Adjusted Savings (kWh/yr)	0	34,238	34,238
Installed Summer peak kW	Pool Pump	Total Gross Demand Reduction (kW)	0.0	7.6	7.6
	Pool Pump	Net Adjusted Demand Reduction (kW)	0.0	6.9	6.9
Installed Winter peak kW	Pool Pump	Total Gross Demand Reduction (kW)	-	7.6	7.6
	Pool Pump	Net Adjusted Demand Reduction (kW)	-	6.9	6.9
	Water Heater (Heat Pump)	Total Participants	0	42	42
Installed kWh/year	Water Heater (Heat Pump)	Total Gross Energy Savings (kWh/yr)	0	59,652	59,652
	Water Heater (Heat Pump)	Net Adjusted Savings (kWh/yr)	0	53,686	53,686
Installed Summer peak kW	Water Heater (Heat Pump)	Total Gross Demand Reduction (kW)	0.0	4.6	4.6
	Water Heater (Heat Pump)	Net Adjusted Demand Reduction (kW)	0.0	4.2	4.2
Installed Winter peak kW	Water Heater (Heat Pump)	Total Gross Demand Reduction (kW)	-	7.9	7.9
	Water Heater (Heat Pump)	Net Adjusted Demand Reduction (kW)	-	7.1	7.1

O.6.4 2021-2022 Virginia Residential Water Savings Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Water Savings	2020	VA	PUR-2020-00274	0.85	7.11	6.8	6.94
Residential Water Savings	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Water Savings	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Residential Water Savings	2023	VA	EM&V Report	4.98	1.22	1.04	0.25



O.7 Virginia Residential Appliance Recycling Program (DSM Phase VII) 2019–2022

O.7.1 2019–2022 Virginia Residential Appliance Recycling Program (DSM Phase VII) Annual Indicator Tables

VA - Residential Appliance Recycling Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$13,009	\$24,834	\$10,451	\$29,331	\$77,624
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$384,884	\$473,111	\$222,880	\$702,471	\$1,783,347
Costs (\$)		Planned	\$1,094,670	\$1,828,534	\$1,784,868	\$1,808,701	\$6,516,773
Costs (\$)		Variance	-\$709,785	-\$1,355,423	-\$1,561,988	-\$1,106,229	-\$4,733,426
		Annual % of Planned	35%	26%	12%	39%	27%
Participants ¹		Total (Gross)	1,579	972	0	2,478	5,029
		Planned	5,225	8,930	8,930	8,930	32,015
		Variance	-3,646	-7,958	-8,930	-6,452	-26,986
		Annual % of Planned (Gross)	30%	11%	0%	28%	16%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	1,255,513	868,091	0	1,467,578	3,591,183
		Realization Rate Weighted by Measure	100%	100%	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	1,255,513	868,091	0	1,467,578	3,591,183
		Net-To-Gross Rate Weighted by Measure	60%	60%	N/A	60%	60%
		Net-To-Gross Adjustment (kWh/yr)	-502,205	-347,237	0	-587,031	-1,436,473
		Net Adjusted Savings (kWh/yr)	753,308	520,855	0	880,547	2,154,710
		Planned Net Savings (kWh/yr)	2,458,500	4,201,800	4,201,800	4,201,800	15,063,900
		Annual % Toward Planned Net Savings	30.6%	12.4%	0%	21.0%	14.3%
		Avg. Gross Savings Per Participant (kWh/yr)	795	893	N/A	592	714
		Avg. Net Savings Per Participant (kWh/yr)	477	536	N/A	355	428
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	187.9	129.9	0.0	219.7	537.5
		Realization Rate Weighted by Measure	100%	100%	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	187.9	129.9	0.0	219.7	537.5
		Net-To-Gross Rate Weighted by Measure	60%	60%	N/A	60%	60%
		Net-To-Gross Adjustment (kW)	-75.2	-52.0	0.0	-87.9	-215.0
		Net Adjusted Demand Reduction (kW)	112.8	78.0	0.0	131.8	322.5
		Planned Net Savings (kW)	280.6	479.5	479.5	479.5	1,719.2
		Annual % Toward Planned Net Reduction	40.2%	16.3%	0%	27.5%	18.8%
		Avg. Gross Demand Reduction Per Participant (kW)	0.1	0.1	N/A	0.09	0.1
		Avg. Net Demand Reduction Per Participant (kW)	0.07	0.08	N/A	0.05	0.06
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
		Realization Rate Weighted by Measure	-	-	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	-	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	-	-	0.0
		Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0
		Planned Net Savings (kW)	-	-	-	-	1,719.2
		Annual % Toward Planned Net Reduction	-	-	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	\$8	\$15	\$19	\$15	\$15
		Cum. \$Admin. per kWh/year (Gross)	\$0.01	\$0.02	\$0.02	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	\$69	\$119	\$152	\$144	\$144
		Cum. \$EM&V per \$Total	7.3%	9.2%	13.9%	10.8%	10.8%
		Cum. \$Rebate per Participant (Gross)	\$20	\$20	\$20	\$20	\$20



O.7.3 2019–2022 Virginia Residential Appliance Recycling Program (DSM Phase VII) Measure Indicator Tables

VA - Residential Appliance Recycling Program		2019	2020	2021	2022	2019-2022
Measures						
Freezer	Total Participants	374	177	0	394	945
Freezer	Total Gross Energy Savings (kWh/yr)	308,376	162,720	0	264,166	735,262
Freezer	Net Adjusted Savings (kWh/yr)	185,025	97,632	0	158,500	441,157
Freezer	Total Gross Demand Reduction (kW)	46.2	24.4	0.0	39.5	110.1
Freezer	Net Adjusted Demand Reduction (kW)	27.7	14.6	0.0	23.7	66.0
Freezer	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
Freezer	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0
Refrigerator	Total Participants	1,205	795	0	2,084	4,084
Refrigerator	Total Gross Energy Savings (kWh/yr)	947,137	705,371	0	1,203,412	2,855,921
Refrigerator	Net Adjusted Savings (kWh/yr)	568,282	423,223	0	722,047	1,713,552
Refrigerator	Total Gross Demand Reduction (kW)	141.8	105.6	0.0	180.1	427.5
Refrigerator	Net Adjusted Demand Reduction (kW)	85.1	63.3	0.0	108.1	256.5
Refrigerator	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
Refrigerator	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0

O.7.4 2019–2022 Virginia Residential Appliance Recycling Program (DSM Phase VII) Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned		Net Adjusted Savings as Percent of		Average Annual Usage		Net Adjusted Savings as Percent of	
			Savings (kWh/year)	Planned	Planned Savings	Average Annual Usage (kWh/year)	Average Annual Usage	Planned Savings	Average Annual Usage	
RAR2	Schedule 1	428.840042	471	471	91%	12,661	3%			
RAR2	Schedule 1EV	246.179465	471	471	52%	18,438	1%			
RAR2	Schedule 24	237.00933	471	471	50%	Not Available	Not Available			
RAR2	Schedule 28	315.351906	471	471	67%	Not Available	Not Available			
RAR2	Schedule 1G	308.28966	471	471	66%	12,098	3%			
RAR2	Schedule 27	366.114396	471	471	78%	Not Available	Not Available			
RAR2	Schedule 1S	436.431599	471	471	93%	27,221	2%			
RAR2	Schedule 1P	703.524154	471	471	150%	31,142	2%			
RAR2	Schedule 1T	741.379894	471	471	158%	17,981	4%			



O.7.5 2019-2022 Virginia Residential Appliance Recycling Program (DSM Phase VII) Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Appliance Recycling	2018	VA	PUR-2018-00168	12.11	1.1	1.19	0.34
Residential Appliance Recycling	2019	VA	PUR-2019-00201	N/A	N/A	N/A	N/A
Residential Appliance Recycling	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Appliance Recycling	2021	VA	PUR-2021-00247	11.04	0.7	0.64	0.24
Residential Appliance Recycling	2022	VA	PUR-2022-00210	16.98	0.99	0.91	0.24
Residential Appliance Recycling	2023	VA	EM&V Report	19.22	0.98	0.9	0.22



O.8 Virginia Residential Home Energy Assessment Program 2019–2022

O.8.1 2019–2022 Virginia Residential Home Energy Assessment Program Annual Indicator Tables

VA - Residential Home Energy Assessment Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$24,171	\$153,132	\$358,842	\$194,634	\$730,778
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$715,145	\$2,981,049	\$7,652,974	\$4,661,476	\$16,010,645
Costs (\$)		Planned	\$2,326,635	\$4,257,214	\$4,755,154	\$4,925,188	\$16,264,190
Costs (\$)		Variance	-\$1,611,489	-\$1,276,164	\$2,897,820	-\$263,712	-\$253,545
		Annual % of Planned	31%	70%	161%	95%	98%
Participants ¹		Total (Gross)	0	2,738	9,917	6,509	19,164
		Planned	11,030	28,536	32,919	32,005	104,490
		Variance	-11,030	-25,798	-23,002	-25,496	-85,326
		Annual % of Planned (Gross)	0%	10%	30%	20%	18%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	4,960,666	22,601,069	12,667,811	40,229,547
		Realization Rate Weighted by Measure	N/A	22%	23%	40%	28%
		Realization Rate Adjustment (kWh/yr)	0	-3,869,320	-17,402,823	-7,600,687	-28,872,830
		Realization Rate Adjusted Savings (kWh/yr)	0	1,091,347	5,198,246	5,067,125	11,356,717
		Net-To-Gross Rate Weighted by Measure	N/A	100%	100%	100%	100%
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	1,091,347	5,198,246	5,067,125	11,356,717
		Planned Net Savings (kWh/yr)	5,175,460	9,329,981	11,219,605	11,583,221	37,308,268
		Annual % Toward Planned Net Savings	0%	11.7%	46.3%	43.7%	30.4%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	1,812	2,279	1,946	2,099
		Avg. Net Savings Per Participant (kWh/yr)	N/A	399	524	778	593
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	411.2	1,414.5	1,024.9	2,850.6
		Realization Rate Weighted by Measure	N/A	22%	23%	40%	29%
		Realization Rate Adjustment (kW)	0.0	-320.7	-1,089.1	-615.0	-2,024.8
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	90.5	325.3	410.0	825.8
		Net-To-Gross Rate Weighted by Measure	N/A	100%	100%	100%	100%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	90.5	325.3	410.0	825.8
		Planned Net Savings (kW)	2,150.5	4,368.7	5,121.4	4,639.2	16,279.8
		Annual % Toward Planned Net Reduction	0%	2.07%	6.35%	8.84%	5.07%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.2	0.1	0.2	0.1
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.03	0.03	0.06	0.04
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	3,163.4	1,724.4	4,887.8
		Realization Rate Weighted by Measure	-	-	23%	40%	29%
		Realization Rate Adjustment (kW)	-	-	-2,435.8	-1,034.6	-3,470.4
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	727.6	689.8	1,417.3
		Net-To-Gross Rate Weighted by Measure	-	-	100%	100%	100%
		Net-To-Gross Adjustment (kW)	-	-	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	-	727.6	689.8	1,417.3
		Planned Net Savings (kW)	0.0	0.0	14,462.2	12,131.2	26,593.4
		Annual % Toward Planned Net Reduction	-	-	5.03%	5.69%	5.33%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	0.3	0.3	0.3
		Avg. Net Demand Reduction Per Participant (kW)	-	-	0.07	0.1	0.09
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$65	\$42	\$38	\$38
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.04	\$0.02	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	N/A	\$431	\$294	\$256	\$256
		Cum. \$EM&V per \$Total	14.1%	7.4%	3.9%	3.8%	3.8%
		Cum. \$Rebate per Participant (Gross)	N/A	\$473	\$542	\$505	\$505



O.8.2 2022 Virginia Residential Home Energy Assessment Program Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2019-2022 Total	
VA - Residential Home Energy Assessment Program	Direct Rebate																
	Direct Implementation																
	Direct EM&V																
	O&M (\$)		\$15,884	\$19,591	\$18,362	\$15,685	\$15,554	\$17,368	\$13,039	\$19,128	\$14,144	\$16,040	\$18,433	\$11,406	\$194,634	\$730,778	
	O&M (\$)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Capital (\$)		\$380,416	\$469,199	\$439,766	\$375,652	\$372,530	\$415,969	\$312,280	\$458,123	\$338,433	\$384,167	\$441,468	\$273,164	\$4,864,476	\$16,010,645	
	Costs (\$)		\$410,432	\$410,432	\$410,432	\$410,432	\$410,432	\$410,432	\$410,432	\$410,432	\$410,432	\$410,432	\$410,432	\$410,432	\$410,432	\$4,864,476	\$16,010,645
	Costs (\$)		\$30,016	\$58,767	\$29,333	\$54,781	\$37,903	\$5,537	\$98,152	\$47,691	\$31,089	\$26,266	\$137,268	\$137,268	\$137,268	\$262,519	\$1,264,940
	Planned		7.7%	17.3%	26.2%	33.8%	41.4%	49.5%	56.2%	65.5%	72.3%	80.1%	89.1%	94.6%	95%	95%	95%
	Annual % of Planned																
Participants'	Total (Gross)		554	680	616	528	480	599	377	634	437	560	697	347	6,509	19,164	
	Planned		2,668	2,667	2,667	2,667	2,667	2,667	2,667	2,667	2,667	2,667	2,667	2,667	2,667	32,005	104,490
	Variance		-2,114	-1,987	-2,051	-2,139	-2,187	-2,068	-2,290	-2,033	-2,230	-2,107	-1,970	-2,320	-2,320	-25,496	-85,326
	Annual % of Planned (Gross)		2%	4%	6%	7%	9%	11%	12%	14%	15%	17%	19%	20%	20%	18%	18%
	Total Gross Energy Savings (kWh/yr)		1,110,918	1,338,614	1,256,844	996,559	959,003	1,111,389	804,202	1,226,079	853,282	990,261	1,383,673	637,009	12,667,811	40,229,547	
	Realization Rate Weighted by Measure		40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
	Realization Rate Adjusted (kWh/yr)		444,367	535,446	502,738	398,624	383,601	444,556	321,681	490,431	341,305	396,104	553,469	254,803	5,067,125	11,356,717	
	Realization Rate Adjusted Savings (kWh/yr)		666,551	803,168	754,107	597,935	575,402	666,834	482,521	735,647	511,957	594,157	830,204	382,205	7,600,687	28,872,830	
	Net-To-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Net-To-Gross Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Installed Summer peak kW	Net Adjusted Savings (kWh/yr)		444,367	535,446	502,738	398,624	383,601	444,556	321,681	490,431	341,305	396,104	553,469	254,803	5,067,125	11,356,717	
	Planned Net Savings (kWh/yr)		965,600	965,238	965,238	965,238	965,238	965,238	965,238	965,238	965,238	965,238	965,238	965,238	965,238	11,893,221	37,308,268
	Annual % Toward Planned Net Savings		3.84%	8.46%	12.8%	16.2%	19.3%	23.4%	26.2%	30.4%	33.3%	36.8%	41.5%	43.7%	43.7%	30.4%	30.4%
	Avg. Gross Savings Per Participant (kWh/yr)		2,005	1,969	2,040	1,887	1,988	1,855	2,133	1,934	1,863	1,768	1,985	1,836	1,946	2,099	2,099
	Avg. Net Savings Per Participant (kWh/yr)		802	787	816	755	799	742	853	774	781	707	794	734	778	593	593
	Total Gross Demand Reduction (kW)		79.9	107.9	111.7	81.6	93.8	94.4	70.3	106.9	62.2	66.7	89.4	50.1	1,024.9	2,850.6	
	Realization Rate Weighted by Measure		40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	
	Realization Rate Adjusted (kW)		-47.9	-64.8	-67.0	-42.0	-56.3	-56.6	-42.0	-64.1	-37.3	-40.0	-59.6	-30.0	-615.0	-2,024.8	
	Realization Rate Adjusted Gross Demand Reduction (kW)		32.0	43.2	44.7	37.6	37.5	37.7	28.1	42.8	24.9	26.7	39.8	20.0	410.0	825.8	
	Net-To-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Installed Winter peak kW	Net-To-Gross Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Net Adjusted Demand Reduction (kW)		32.0	43.2	44.7	37.6	37.5	37.7	28.1	42.8	24.9	26.7	39.8	20.0	410.0	825.8	
	Planned Net Savings (kW)		386.7	386.6	386.6	386.6	386.6	386.6	386.6	386.6	386.6	386.6	386.6	386.6	386.6	4,639.2	16,279.8
	Annual % Toward Planned Net Reduction		0.69%	1.62%	2.58%	3.29%	4.09%	4.91%	5.52%	6.44%	6.97%	7.55%	8.41%	8.84%	8.84%	5.07%	5.07%
	Avg. Gross Demand Reduction Per Participant (kW)		0.14	0.16	0.18	0.15	0.20	0.16	0.19	0.17	0.14	0.12	0.14	0.14	0.14	0.2	0.1
	Avg. Net Demand Reduction Per Participant (kW)		0.06	0.06	0.07	0.06	0.08	0.06	0.07	0.07	0.06	0.05	0.06	0.06	0.06	0.06	0.04
	Total Gross Demand Reduction (kW)		151.8	180.3	173.0	133.7	126.6	149.0	112.2	167.7	114.0	137.2	186.5	89.4	1,724.4	4,887.8	
	Realization Rate Weighted by Measure		40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	
	Realization Rate Adjusted (kW)		-91.1	-108.2	-103.8	-80.2	-77.8	-89.4	-67.3	-100.6	-68.4	-82.3	-111.9	-53.6	-1,034.6	-3,470.4	
	Realization Rate Adjusted Gross Demand Reduction (kW)		60.7	72.1	69.2	53.5	51.8	59.6	44.9	67.1	45.6	54.9	74.6	35.8	689.8	1,417.3	
Program Performance	Net-To-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Net Adjusted Demand Reduction (kW)		60.7	72.1	69.2	53.5	51.8	59.6	44.9	67.1	45.6	54.9	74.6	35.8	689.8	1,417.3	
	Planned Net Savings (kW)		1,011.3	1,010.9	1,010.9	1,010.9	1,010.9	1,010.9	1,010.9	1,010.9	1,010.9	1,010.9	1,010.9	1,010.9	1,010.9	12,131.2	26,593.4
	Annual % Toward Planned Net Reduction		0.50%	0.98%	1.67%	2.11%	2.53%	3.02%	3.39%	3.95%	4.32%	4.78%	5.39%	5.68%	5.68%	5.33%	5.33%
	Avg. Gross Demand Reduction Per Participant (kW)		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	Avg. Net Demand Reduction Per Participant (kW)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.09
	Cum. \$Admin. per Participant (Gross)		\$42	\$41	\$41	\$40	\$40	\$40	\$40	\$39	\$39	\$39	\$38	\$38	\$38	\$38	\$38
	Cum. \$Admin. per kWh/year (Gross)		\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02
	Cum. \$EM&V per \$Total		\$290	\$284	\$278	\$274	\$270	\$264	\$261	\$257	\$256	\$256	\$256	\$256	\$256	\$256	\$256
	Cum. \$Rebate per Participant (Gross)		\$538	\$533	\$530	\$526	\$524	\$520	\$519	\$516	\$514	\$510	\$507	\$505	\$505	\$505	\$505



O.8.3 2019–2022 Virginia Residential Home Energy Assessment Program Measure Indicator Tables

VA - Residential Home Energy Assessment Program			2019	2020	2021	2022	2019-2022
Measures							
	Water Distribution	Total Participants	0	228	570	235	1,033
Installed kWh/year	Water Distribution	Total Gross Energy Savings (kWh/yr)	0	75,287	144,734	109,626	329,647
	Water Distribution	Net Adjusted Savings (kWh/yr)	0	16,563	33,289	43,850	93,702
Installed Summer peak kW	Water Distribution	Total Gross Demand Reduction (kW)	0.0	3.4	7.8	6.0	17.1
	Water Distribution	Net Adjusted Demand Reduction (kW)	0.0	0.8	1.8	2.4	4.9
Installed Winter peak kW	Water Distribution	Total Gross Demand Reduction (kW)	-	-	7.8	6.0	13.7
	Water Distribution	Net Adjusted Demand Reduction (kW)	-	-	1.8	2.4	4.2
	Water Heater Replacement	Total Participants	0	0	3	0	3
Installed kWh/year	Water Heater Replacement	Total Gross Energy Savings (kWh/yr)	0	0	4,485	0	4,485
	Water Heater Replacement	Net Adjusted Savings (kWh/yr)	0	0	1,032	0	1,032
Installed Summer peak kW	Water Heater Replacement	Total Gross Demand Reduction (kW)	0.0	0.0	0.3	0.0	0.3
	Water Heater Replacement	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.1	0.0	0.1
Installed Winter peak kW	Water Heater Replacement	Total Gross Demand Reduction (kW)	-	-	0.6	0.0	0.6
	Water Heater Replacement	Net Adjusted Demand Reduction (kW)	-	-	0.1	0.0	0.1
	Water Heater Turndown 10 Degrees	Total Participants	0	5	17	11	33
Installed kWh/year	Water Heater Turndown 10 Degrees	Total Gross Energy Savings (kWh/yr)	0	408	2,932	977	4,317
	Water Heater Turndown 10 Degrees	Net Adjusted Savings (kWh/yr)	0	90	674	391	1,155
Installed Summer peak kW	Water Heater Turndown 10 Degrees	Total Gross Demand Reduction (kW)	0.0	0.0	0.3	0.1	0.5
	Water Heater Turndown 10 Degrees	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.1	0.0	0.1
Installed Winter peak kW	Water Heater Turndown 10 Degrees	Total Gross Demand Reduction (kW)	-	-	0.3	0.1	0.4
	Water Heater Turndown 10 Degrees	Net Adjusted Demand Reduction (kW)	-	-	0.1	0.0	0.1



VA - Residential Home Energy Assessment Program			2019	2020	2021	2022	2019-2022
Measures							
	Heat Pump Tune Up	Total Participants	0	491	713	228	1,432
Installed kWh/year	Heat Pump Tune Up	Total Gross Energy Savings (kWh/yr)	0	145,850	213,554	69,077	428,481
	Heat Pump Tune Up	Net Adjusted Savings (kWh/yr)	0	32,087	49,117	27,631	108,835
Installed Summer peak kW	Heat Pump Tune Up	Total Gross Demand Reduction (kW)	0.0	115.9	79.9	25.8	221.5
	Heat Pump Tune Up	Net Adjusted Demand Reduction (kW)	0.0	25.5	18.4	10.3	54.2
Installed Winter peak kW	Heat Pump Tune Up	Total Gross Demand Reduction (kW)	-	-	179.6	37.6	217.2
	Heat Pump Tune Up	Net Adjusted Demand Reduction (kW)	-	-	41.3	15.1	56.3
	Heat Pump Upgrade	Total Participants	0	20	17	46	83
Installed kWh/year	Heat Pump Upgrade	Total Gross Energy Savings (kWh/yr)	0	15,696	16,776	43,217	75,688
	Heat Pump Upgrade	Net Adjusted Savings (kWh/yr)	0	3,453	3,859	17,287	24,598
Installed Summer peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	0.0	1.4	3.4	4.5	9.4
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	0.0	0.3	0.8	1.8	2.9
Installed Winter peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	-	-	6.9	22.3	29.2
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	-	-	1.6	8.9	10.5
	Hot Water Pipe Insulation	Total Participants	0	402	870	568	1,840
Installed kWh/year	Hot Water Pipe Insulation	Total Gross Energy Savings (kWh/yr)	0	232,466	332,575	561,821	1,126,862
	Hot Water Pipe Insulation	Net Adjusted Savings (kWh/yr)	0	51,142	76,492	224,728	352,363
Installed Summer peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	0.0	26.5	38.0	64.1	128.6
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.0	5.8	8.7	25.7	40.2
Installed Winter peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	-	-	38.0	64.1	102.1
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	-	-	8.7	25.7	34.4
	Lighting	Total Participants	0	2,235	9,190	6,269	17,694
Installed kWh/year	Lighting	Total Gross Energy Savings (kWh/yr)	0	4,466,597	21,849,906	11,620,983	37,937,485
	Lighting	Net Adjusted Savings (kWh/yr)	0	982,651	5,025,478	4,648,393	10,656,523
Installed Summer peak kW	Lighting	Total Gross Demand Reduction (kW)	0.0	250.1	1,269.4	684.8	2,204.2
	Lighting	Net Adjusted Demand Reduction (kW)	0.0	55.0	292.0	273.9	620.9
Installed Winter peak kW	Lighting	Total Gross Demand Reduction (kW)	-	-	2,908.0	1,546.4	4,454.4
	Lighting	Net Adjusted Demand Reduction (kW)	-	-	668.8	618.6	1,287.4

VA - Residential Home Energy Assessment Program			2019	2020	2021	2022	2019-2022
Measures							
	Cool Roof	Total Participants	0	0	0	3	3
Installed kWh/year	Cool Roof	Total Gross Energy Savings (kWh/yr)	0	0	0	1,249	1,249
	Cool Roof	Net Adjusted Savings (kWh/yr)	0	0	0	499	499
Installed Summer peak kW	Cool Roof	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	2.4	2.4
	Cool Roof	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.9	0.9
Installed Winter peak kW	Cool Roof	Total Gross Demand Reduction (kW)	-	-	-	0.0	0.0
	Cool Roof	Net Adjusted Demand Reduction (kW)	-	-	-	0.0	0.0
	Duct Insulation	Total Participants	0	5	0	2	7
Installed kWh/year	Duct Insulation	Total Gross Energy Savings (kWh/yr)	0	2,567	0	497	3,064
	Duct Insulation	Net Adjusted Savings (kWh/yr)	0	565	0	199	764
Installed Summer peak kW	Duct Insulation	Total Gross Demand Reduction (kW)	0.0	2.1	0.0	0.5	2.6
	Duct Insulation	Net Adjusted Demand Reduction (kW)	0.0	0.5	0.0	0.2	0.7
Installed Winter peak kW	Duct Insulation	Total Gross Demand Reduction (kW)	-	-	-	0.3	0.3
	Duct Insulation	Net Adjusted Demand Reduction (kW)	-	-	-	0.1	0.1
	Duct Sealing	Total Participants	0	39	72	817	928
Installed kWh/year	Duct Sealing	Total Gross Energy Savings (kWh/yr)	0	20,900	36,107	260,364	317,371
	Duct Sealing	Net Adjusted Savings (kWh/yr)	0	4,598	8,305	104,146	117,048
Installed Summer peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	0.0	11.6	15.4	236.8	263.7
	Duct Sealing	Net Adjusted Demand Reduction (kW)	0.0	2.5	3.5	94.7	100.8
Installed Winter peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	-	-	22.3	47.5	69.8
	Duct Sealing	Net Adjusted Demand Reduction (kW)	-	-	5.1	19.0	24.1
	ECM Fan Motor	Total Participants	0	1	0	0	1
Installed kWh/year	ECM Fan Motor	Total Gross Energy Savings (kWh/yr)	0	897	0	0	897
	ECM Fan Motor	Net Adjusted Savings (kWh/yr)	0	197	0	0	197
Installed Summer peak kW	ECM Fan Motor	Total Gross Demand Reduction (kW)	0.0	0.2	0.0	0.0	0.2
	ECM Fan Motor	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	ECM Fan Motor	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
	ECM Fan Motor	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0



O.8.4 2019–2022 Virginia Residential Home Energy Assessment Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	Net Systemwide Planned Savings (kWh/year)		Net Adjusted Savings as Percent of Planned Savings		Average Annual Usage (kWh/year)		Net Adjusted Savings as Percent of Average Annual Usage	
		AverageNetImpact	PerPart	Planned Savings	as Percent of Planned Savings	(kWh/year)	Not Available	Not Available	as Percent of Average Annual Usage
RTHO	Not available	592.606813		469	126%	Not Available	18,438	Not Available	6%
RTHO	Schedule 1EV	1027.549829		469	219%	Not Available	12,661	Not Available	5%
RTHO	Schedule 1	593.05339		469	126%	Not Available	17,981	Not Available	5%
RTHO	Schedule 28	254.843708		469	54%	Not Available			
RTHO	Schedule 1T	842.208019		469	179%	Not Available			
RTHO	Schedule EV	57.047576		469	12%	Not Available			
RTHO	Schedule 24	255.275344		469	54%	Not Available			
RTHO	Schedule 1P	692.875143		469	148%	31,142			2%
RTHO	Schedule 1S	685.974113		469	146%	27,221			3%
RTHO	Schedule DP-R	1260.185122		469	269%	12,007			10%
RTHO	Schedule 27	368.018307		469	78%	Not Available			
RTHO	Schedule 1G	738.779938		469	157%	12,098			6%

O.8.5 2019-2022 Virginia Residential Home Energy Assessment Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Home Energy Assessment	2018	VA	PUR-2018-00168	3.4	1.38	1.13	0.41
Residential Home Energy Assessment	2019	VA	PUR-2019-00201	N/A	N/A	N/A	N/A
Residential Home Energy Assessment	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Home Energy Assessment	2021	VA	PUR-2021-00247	12.98	2.89	2.37	0.28
Residential Home Energy Assessment	2022	VA	PUR-2022-00210	23.48	6.14	4.95	0.33
Residential Home Energy Assessment	2023	VA	EM&V Report	25.06	8.46	5.94	0.35



O.9 Virginia Residential Customer Engagement Program 2020–2022

O.9.1 2020-2022 Virginia Residential Customer Engagement Program Annual Indicator Tables

VA - Residential Customer Engagement Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$6,939	\$94,387	\$73,045	\$174,371
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$162,614	\$2,012,981	\$1,749,425	\$3,925,020
Costs (\$)		Planned	\$0	\$1,904,508	\$1,931,632	\$3,836,140
Costs (\$)		Variance	\$162,614	\$108,473	-\$182,207	\$88,880
		Annual % of Planned	N/A	106%	91%	102%
Participants ¹		Total (Gross)	0	286,456	263,463	549,919
		Planned	0	287,500	277,400	564,900
		Variance	0	-1,044	-13,937	-14,981
		Annual % of Planned (Gross)	N/A	100%	95%	97%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	58,274,006	53,407,869	111,681,875
		Realization Rate Weighted by Measure	N/A	8%	17%	12%
		Realization Rate Adjustment (kWh/yr)	0	-53,612,085	-44,328,532	-97,940,617
		Realization Rate Adjusted Savings (kWh/yr)	0	4,661,920	9,079,338	13,741,258
		Net-To-Gross Rate Weighted by Measure	N/A	100%	100%	100%
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	4,661,920	9,079,338	13,741,258
		Planned Net Savings (kWh/yr)	0	48,300,000	46,603,200	94,903,200
		Annual % Toward Planned Net Savings	N/A	9.65%	19.5%	14.5%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	203	203	203
		Avg. Net Savings Per Participant (kWh/yr)	N/A	16	34	25
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	13,512.5	13,037.8	26,550.3
		Annual % Toward Planned Net Reduction	N/A	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.0	0.0	0.0
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.0	0.0	0.0
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
		Realization Rate Weighted by Measure	-	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	-	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	-	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	9,200.0	8,876.8	18,076.8
		Annual % Toward Planned Net Reduction	-	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.0	0.0	-
		Avg. Net Demand Reduction Per Participant (kW)	-	0.0	0.0	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$0	\$0	\$0
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.00	\$0.00	\$0.00
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	18.9%	9.5%	8.5%	8.5%
		Cum. \$Rebate per Participant (Gross)	N/A	\$0	\$0	\$0



O.9.3 2020–2022 Virginia Residential Customer Engagement Program Measure Indicator Tables

VA - Residential Customer Engagement Program		2020	2021	2022	2020-2022
Measures					
	Digital Home Energy Reports	0	177,334	161,256	338,590
Installed kWh/year	Digital Home Energy Reports	0	38,920,931	35,568,527	74,489,458
	Digital Home Energy Reports	0	3,113,674	6,046,650	9,160,324
Installed Summer peak kW	Digital Home Energy Reports	0.0	0.0	0.0	0.0
	Digital Home Energy Reports	0.0	0.0	0.0	0.0
Installed Winter peak kW	Digital Home Energy Reports	-	0.0	0.0	0.0
	Digital Home Energy Reports	-	0.0	0.0	0.0
	Paper Home Energy Reports	0	109,122	102,207	211,329
Installed kWh/year	Paper Home Energy Reports	0	19,353,074	17,839,342	37,192,417
	Paper Home Energy Reports	0	1,548,246	3,032,688	4,580,934
Installed Summer peak kW	Paper Home Energy Reports	0.0	0.0	0.0	0.0
	Paper Home Energy Reports	0.0	0.0	0.0	0.0
Installed Winter peak kW	Paper Home Energy Reports	-	0.0	0.0	0.0
	Paper Home Energy Reports	-	0.0	0.0	0.0



O.9.4 2020–2022 Virginia Residential Customer Engagement Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RCEB	Not available	-273.937607	168	-163%	Not Available	Not Available
RCEB	Schedule GS-2	0	168	0%	307,328	0%
RCEB	Schedule GS-1	14.693478	168	9%	18,532	0%
RCEB	Schedule IT	27.583593	168	16%	17,981	0%
RCEB	Schedule 5VA	20.828791	168	12%	Not Available	Not Available
RCEB	Schedule 1	24.981144	168	15%	12,661	0%
RCEB	Schedule 1S	29.632343	168	18%	27,221	0%
RCEB	Schedule 100	18.464682	168	11%	Not Available	Not Available
RCEB	Schedule 1G	26.60971	168	16%	12,098	0%

O.9.5 2020–2022 Virginia Residential Customer Engagement Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Customer Engagement	2019	VA	PUR-2019-00201	10.13	1.95	1.54	0.49
Residential Customer Engagement	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Customer Engagement	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Customer Engagement	2022	VA	PUR-2022-00210	10.66	1.77	1.38	0.44
Residential Customer Engagement	2023	VA	EM&V Report	12.87	1.8	1.41	0.4



O.10 Virginia Residential Manufactured Housing Program 2020–2022

O.10.1 2020–2022 Virginia Residential Manufactured Housing Program Annual Indicator Tables

VA - Residential Manufactured Housing Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$2,122	\$30,122	\$26,196	\$58,440
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$49,716	\$642,418	\$627,383	\$1,319,517
Costs (\$)		Planned	\$0	\$1,129,167	\$1,733,136	\$2,862,303
Costs (\$)		Variance	\$49,716	-\$486,749	-\$1,105,753	-\$1,542,786
		Annual % of Planned	N/A	57%	36%	46%
Participants ¹		Total (Gross)	0	3	3	6
		Planned	0	1,000	2,200	3,200
		Variance	0	-997	-2,197	-3,194
		Annual % of Planned (Gross)	N/A	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	916	310	1,225
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	916	310	1,225
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	-92	-31	-123
		Net Adjusted Savings (kWh/yr)	0	824	279	1,103
		Planned Net Savings (kWh/yr)	0	1,773,101	3,900,822	5,673,923
		Annual % Toward Planned Net Savings	N/A	0.05%	0.01%	0.02%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	305	103	204
		Avg. Net Savings Per Participant (kWh/yr)	N/A	275	93	184
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.1	0.0	0.1
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.1	0.0	0.1
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.1	0.0	0.1
		Planned Net Savings (kW)	0.0	459.0	1,009.8	1,468.8
		Annual % Toward Planned Net Reduction	N/A	0.02%	0.00%	0.01%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.03	0.01	0.02
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.03	0.01	0.02
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	0.1	0.1	0.2
		Realization Rate Weighted by Measure	-	-	-	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	0.1	0.1	0.2
		Net-To-Gross Rate Weighted by Measure	-	90%	90%	90%
		Net-To-Gross Adjustment (kW)	-	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	0.1	0.1	0.2
		Planned Net Savings (kW)	-	171.0	376.2	547.2
		Annual % Toward Planned Net Reduction	-	0.06%	0.01%	0.03%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.04	0.02	0.03
		Avg. Net Demand Reduction Per Participant (kW)	-	0.03	0.02	0.03
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$10,748	\$9,740	\$9,740
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$35	\$48	\$48
		Cum. \$Admin. per kW (Gross)	N/A	\$381,172	\$523,376	\$523,376
		Cum. \$EM&V per \$Total	92.1%	22.1%	18.0%	18.0%
		Cum. \$Rebate per Participant (Gross)	N/A	\$15	\$29	\$29



O.10.2 2022 Virginia Residential Manufactured Housing Program Monthly Indicator Tables

Category	Measure	Indicator	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2020-2022	
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	Total	Total	
VA - Residential Manufactured Housing Program	Direct Rebate																		
	Direct Implementation																		
	Direct EM&V																		
	Indirect Other (Administrative)																		
Capital (\$)		\$1,547	\$2,337	\$2,174	\$2,361	\$2,177	\$2,391	\$1,799	\$3,351	\$1,952	\$1,917	\$1,953	\$1,836	\$0	\$26,196	\$0	\$0	\$58,440	
Costs (\$)		\$46,633	\$55,973	\$52,072	\$56,556	\$52,146	\$57,256	\$43,000	\$80,266	\$46,750	\$45,906	\$46,780	\$43,964	\$627,383	\$1,319,517	\$1,319,517	\$1,319,517	\$2,862,303	
Costs (\$)		\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$144,428	\$1,703,136	\$2,862,303
Costs (\$)		-\$97,956	-\$88,455	-\$92,356	-\$87,872	-\$92,282	-\$87,172	-\$101,348	-\$64,162	-\$97,676	-\$96,522	-\$97,648	-\$100,464	-\$110,573	-\$1,105,753	-\$1,105,753	-\$1,105,753	-\$1,542,786	
		2.7%	5.9%	8.9%	12.2%	15.2%	18.5%	21.0%	25.6%	28.3%	31.0%	33.7%	36.2%	36%	36%	36%	36%	46%	
Participants ¹	Total (Gross)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
	Planned		187	183	183	183	183	183	183	183	183	183	183	183	183	183	183	3,200	
	Variance		-187	-183	-183	-183	-183	-183	-183	-183	-183	-183	-183	-183	-183	-183	-183	-2,197	
	Annual % of Planned (Gross)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Installed kWh/year	Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	310	
	Total Gross Energy Savings (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	
	Realization Rate Weighted by Measure		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Adjusted (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net-T-o-Gross Rate Weighted by Measure	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	310	
	Net-T-o-Gross Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	90%	
	Net-T-o-Gross Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-31	
	Net Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	279	
Planned Net Savings (kWh/yr)	Planned Net Savings (kWh/yr)		331,570	324,477	324,477	324,477	324,477	324,477	324,477	324,477	324,477	324,477	324,477	324,477	324,477	3,900,822	5,673,923	5,673,923	
	Annual % Toward Planned Net Savings		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.01%	0.02%	0.02%	
	Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	103	
	Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	93	
Installed Summer peak kW	Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
	Total Gross Demand Reduction (kW)		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Weighted by Measure		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Installed Winter peak kW	Realization Rate Adjusted Gross Demand Reduction (kW)		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Net-T-o-Gross Rate Weighted by Measure		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Net-T-o-Gross Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Net Adjusted Demand Reduction (kW)		85.8	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	1,009.8	1,468.8		
Program Performance	Planned Net Savings (kW)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.01%	
	Annual % Toward Planned Net Reduction		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.01%	
	Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.01	
	Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.01	
Cumulative Savings	Total Gross Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	
	Realization Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Realization Rate Adjusted (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Net-T-o-Gross Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Program Performance	Net-T-o-Gross Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Net Adjusted Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Planned Net Savings (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Annual % Toward Planned Net Reduction		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cumulative Savings	Avg. Gross Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Avg. Net Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Cum. \$Admin. per Participant (Gross)		\$11,397	\$12,176	\$12,901	\$13,688	\$14,414	\$11,408	\$11,868	\$10,156	\$8,789	\$9,108	\$9,454	\$9,740	\$9,740	\$9,740	\$9,740	\$9,740	
	Cum. \$Admin. per kWh/year (Gross)		\$37	\$40	\$42	\$45	\$47	\$44	\$46	\$43	\$43	\$45	\$46	\$46	\$48	\$48	\$48	\$48	
Cumulative Savings	Cum. \$Admin. per kW (Gross)		\$404,190	\$431,817	\$457,520	\$485,435	\$511,174	\$478,744	\$497,615	\$478,955	\$472,277	\$486,443	\$506,936	\$523,376	\$523,376	\$523,376	\$523,376	\$523,376	
	Cum. \$EM&V per \$Total		20.7%	20.5%	19.8%	19.8%	19.5%	19.7%	18.9%	20.6%	19.9%	19.2%	18.6%	18.0%	18.0%	18.0%	18.0%	18.0%	
	Cum. \$Rebate per Participant (Gross)		\$15	\$15	\$15	\$15	\$15	\$15	\$18	\$29	\$29	\$29	\$29	\$29	\$29	\$29	\$29	\$29	
	Cum. \$Rebate per Participant (Gross)		\$15	\$15	\$15	\$15	\$15	\$18	\$18	\$29	\$29	\$29	\$29	\$29	\$29	\$29	\$29	\$29	



O.10.3 2020–2022 Virginia Residential Manufactured Housing Program Measure Indicator Tables

VA - Residential Manufactured Housing Program		2020	2021	2022	2020-2022
Measures					
	Hot Water Pipe Insulation	0	2	0	2
Installed kWh/year	Hot Water Pipe Insulation	0	254	0	254
	Hot Water Pipe Insulation	0	228	0	228
Installed Summer peak kW	Hot Water Pipe Insulation	0.0	0.0	0.0	0.0
	Hot Water Pipe Insulation	0.0	0.0	0.0	0.0
Installed Winter peak kW	Hot Water Pipe Insulation	-	0.0	-	0.0
	Hot Water Pipe Insulation	-	0.0	-	0.0
	Hot Water Tank Wrap	0	1	0	1
Installed kWh/year	Hot Water Tank Wrap	0	240	0	240
	Hot Water Tank Wrap	0	216	0	216
Installed Summer peak kW	Hot Water Tank Wrap	0.0	0.0	0.0	0.0
	Hot Water Tank Wrap	0.0	0.0	0.0	0.0
Installed Winter peak kW	Hot Water Tank Wrap	-	0.0	-	0.0
	Hot Water Tank Wrap	-	0.0	-	0.0
	Lighting	0	3	3	6
Installed kWh/year	Lighting	0	385	310	695
	Lighting	0	347	279	626
Installed Summer peak kW	Lighting	0.0	0.0	0.0	0.1
	Lighting	0.0	0.0	0.0	0.0
Installed Winter peak kW	Lighting	-	0.0	0.1	0.1
	Lighting	-	0.0	0.1	0.1
	Water Distribution	0	1	0	1
Installed kWh/year	Water Distribution	0	36	0	36
	Water Distribution	0	33	0	33
Installed Summer peak kW	Water Distribution	0.0	0.0	0.0	0.0
	Water Distribution	0.0	0.0	0.0	0.0
Installed Winter peak kW	Water Distribution	-	0.0	-	0.0
	Water Distribution	-	0.0	-	0.0



O.10.4 2020–2022 Virginia Residential Manufactured Housing Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RMHP	Not available	183.782379	1,773	10% Not Available	12,661	1%
RMHP	Schedule 1	183.782379	1,773	10%	12,661	1%

O.10.5 2020–2022 Virginia Residential Manufactured Housing Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Manufactured Housing	2019	VA	PUR-2019-00201	4.84	1.47	1.38	0.44
Residential Manufactured Housing	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Manufactured Housing	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Manufactured Housing	2022	VA	PUR-2022-00210	1.48	0.11	0.1	0.008
Residential Manufactured Housing	2023	VA	EM&V Report	1.48	0.12	0.11	0.09



O.11 Virginia Residential Multifamily Program 2020–2022

O.11.1 2020–2022 Virginia Residential Multifamily Program Annual Indicator Tables

VA - Residential Multifamily Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$1,235	\$29,521	\$32,108	\$62,863
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$28,940	\$629,586	\$768,978	\$1,427,504
Costs (\$)		Planned	\$0	\$1,677,691	\$2,269,146	\$3,946,837
Costs (\$)		Variance	\$28,940	-\$1,048,105	-\$1,500,168	-\$2,519,334
		Annual % of Planned	N/A	38%	34%	36%
Participants ¹		Total (Gross)	0	9	1,634	1,643
		Planned	0	9,000	14,000	23,000
		Variance	0	-8,991	-12,366	-21,357
		Annual % of Planned (Gross)	N/A	0%	12%	7%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	335	428,505	428,840
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	335	428,505	428,840
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	-33	-42,851	-42,884
		Net Adjusted Savings (kWh/yr)	0	301	385,655	385,956
		Planned Net Savings (kWh/yr)	0	7,976,317	12,407,604	20,383,921
		Annual % Toward Planned Net Savings	N/A	0.00%	3.11%	1.89%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	37	262	261
		Avg. Net Savings Per Participant (kWh/yr)	N/A	33	236	235
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	106.7	106.7
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	106.7	106.7
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	0.0	-10.7	-10.7
		Net Adjusted Demand Reduction (kW)	0.0	0.0	96.0	96.0
		Planned Net Savings (kW)	0.0	2,835.0	4,410.0	7,245.0
		Annual % Toward Planned Net Reduction	N/A	0.00%	2.18%	1.33%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.00	0.07	0.06
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.00	0.06	0.06
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	0.0	168.7	168.8
		Realization Rate Weighted by Measure	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	0.0	168.7	168.8
		Net-To-Gross Rate Weighted by Measure	-	90%	90%	90%
		Net-To-Gross Adjustment (kW)	-	0.0	-16.9	-16.9
		Net Adjusted Demand Reduction (kW)	-	0.0	151.9	151.9
		Planned Net Savings (kW)	0.0	891.0	1,386.0	2,277.0
		Annual % Toward Planned Net Reduction	-	0.00%	11.0%	6.67%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.01	0.1	0.1
		Avg. Net Demand Reduction Per Participant (kW)	-	0.00	0.09	0.09
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$3,417	\$38	\$38
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$92	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	\$820,780	\$589	\$589
		Cum. \$EM&V per \$Total	92.4%	13.9%	10.7%	10.7%
		Cum. \$Rebate per Participant (Gross)	N/A	\$7	\$53	\$53



O.11.2 2022 Virginia Residential Multifamily Program Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2020-2022 Total	
VA - Residential Multifamily Program	Direct Rebate		\$2,102	\$2,264	\$2,932	\$2,852	\$2,484	\$2,640	\$3,019	\$3,381	\$2,843	\$2,455	\$2,637	\$2,497	\$32,108	\$62,863	
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Direct EM&V		\$50,347	\$54,223	\$70,232	\$68,306	\$59,499	\$63,226	\$72,306	\$80,980	\$68,101	\$58,797	\$63,147	\$59,815	\$768,978	\$1,427,904	
	Capital (\$)		\$189,096	\$189,096	\$189,096	\$189,096	\$189,096	\$189,096	\$189,096	\$189,096	\$189,096	\$189,096	\$189,096	\$189,096	\$189,096	\$2,269,146	\$3,946,837
	Costs (\$)		-\$138,748	-\$134,873	-\$118,864	-\$120,790	-\$129,587	-\$125,869	-\$116,789	-\$108,116	-\$120,995	-\$100,298	-\$125,949	-\$129,281	-\$1,500,168	\$2,519,334	
	Planned		2.2%	4.6%	7.7%	10.7%	13.3%	16.1%	19.3%	22.9%	25.9%	28.5%	31.3%	33.9%	36%		
	Variance																
	Annual % of Planned																
	Total (Gross)		4	25	118	211	73	94	279	241	260	158	44	127	1,634	1,643	
	Participants*		1,174	1,166	1,166	1,166	1,166	1,166	1,166	1,166	1,166	1,166	1,166	1,166	1,166	14,000	23,000
Installed kWh/year		-1,170	-1,141	-1,048	-955	-1,093	-1,072	-887	-925	-908	-1,008	-1,122	-1,039	-12,366	-21,357		
Total Gross Energy Savings (kWh/yr)		260	5,844	28,481	37,228	19,284	34,680	91,615	74,730	71,822	17,486	2,148	44,926	428,505	428,840		
Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Net-To-Gross Rate Weighted by Measure		260	5,844	28,481	37,228	19,284	34,680	91,615	74,730	71,822	17,486	2,148	44,926	428,505	428,840		
Net-To-Gross Rate Adjusted Savings (kWh/yr)		-26	-584	-2,848	-3,723	-1,928	-3,468	-9,161	-7,473	-7,182	-1,749	-4,493	-4,693	-42,881	-42,884		
Net Adjusted Savings (kWh/yr)		234	5,260	25,633	33,505	17,356	31,212	82,453	67,257	64,640	15,738	1,933	40,433	385,625	385,956		
Planned % Toward Planned Net Savings		1,040,466	1,033,376	1,033,376	1,033,376	1,033,376	1,033,376	1,033,376	1,033,376	1,033,376	1,033,376	1,033,376	1,033,376	1,033,376	12,407,604	20,363,921	
Annual % Toward Planned Net Savings		0.00%	0.04%	0.25%	0.52%	0.66%	0.91%	1.59%	2.12%	2.64%	2.77%	2.78%	3.11%	3.11%	1.89%		
Avg. Gross Savings Per Participant (kWh/yr)		65	234	241	176	264	369	328	310	276	111	49	354	262	261		
Avg. Net Savings Per Participant (kWh/yr)		59	210	217	159	238	332	296	279	249	100	44	318	236	235		
Installed Summer peak kW		0.0	1.6	7.6	13.3	4.9	7.5	21.1	17.7	19.1	2.6	0.0	11.2	106.7	106.7		
Total Gross Demand Reduction (kW)		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Realization Rate Weighted by Measure		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	1.6	7.6	13.3	4.9	7.5	21.1	17.7	19.1	2.6	0.0	11.2	106.7	106.7		
Net-To-Gross Rate Weighted by Measure		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Net-To-Gross Rate Adjusted (kW)		0.0	-0.2	-0.8	-1.3	-0.5	-0.7	-2.1	-1.8	-1.9	-0.3	0.0	-1.1	-10.7	-10.7		
Net Adjusted Demand Reduction (kW)		369.8	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3		
Planned Net Savings (kW)		0.00%	0.03%	0.19%	0.46%	0.56%	0.71%	1.14%	1.50%	1.89%	1.95%	1.95%	2.18%	2.18%	1.39%		
Annual % Toward Planned Net Reduction		0.01	0.07	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06		
Avg. Gross Demand Reduction Per Participant (kW)		0.01	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06		
Avg. Net Demand Reduction Per Participant (kW)		0.01	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06		
Installed Winter peak kW		0.0	2.1	11.3	18.8	8.0	12.9	35.5	29.3	29.8	4.0	0.0	17.0	168.7	168.8		
Total Gross Demand Reduction (kW)		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Realization Rate Weighted by Measure		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	2.1	11.3	18.8	8.0	12.9	35.5	29.3	29.8	4.0	0.0	17.0	168.7	168.8		
Net-To-Gross Rate Weighted by Measure		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Net-To-Gross Rate Adjusted (kW)		0.0	-0.2	-1.1	-1.9	-0.8	-1.3	-3.5	-2.9	-3.0	-0.4	0.0	-1.7	-16.9	-16.9		
Net Adjusted Demand Reduction (kW)		0.0	1.9	10.1	16.9	7.2	11.6	31.9	26.4	26.9	3.6	0.0	15.3	151.9	151.9		
Planned Net Savings (kW)		116.2	115.4	115.4	115.4	115.4	115.4	115.4	115.4	115.4	115.4	115.4	115.4	115.4	1,386.0		
Annual % Toward Planned Net Reduction		0.00%	0.14%	0.87%	2.09%	2.61%	3.45%	5.75%	7.65%	9.69%	9.85%	9.85%	11.0%	11.0%	6.67%		
Avg. Gross Demand Reduction Per Participant (kW)		0.01	0.08	0.10	0.09	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
Avg. Net Demand Reduction Per Participant (kW)		0.01	0.08	0.09	0.08	0.10	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.09		
Program Performance																	
Cum. \$Admin. per Participant (Gross)		\$2,528	\$924	\$2,444	\$1,111	\$99	\$86	\$60	\$42	\$39	\$40	\$38	\$38	\$38	\$38		
Cum. \$Admin. per kWh/year (Gross)		\$55	\$5	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Cum. \$Admin. per kW (Gross)		\$489,268	\$20,462	\$4,072	\$1,807	\$1,578	\$1,315	\$875	\$711	\$595	\$632	\$589	\$589	\$589	\$589		
Cum. \$EM&V per \$1 total		12.9%	12.3%	12.8%	12.7%	12.4%	12.1%	11.3%	11.4%	10.9%	11.2%	10.7%	10.7%	10.7%	10.7%		
Cum. \$Rebate per Participant (Gross)		\$7	\$36	\$44	\$38	\$40	\$44	\$54	\$55	\$52	\$51	\$51	\$51	\$51	\$53		



O.11.3 2020-2022 Virginia Residential Multifamily Program Measure Indicator Tables

VA - Residential Multifamily Program		2020	2021	2022	2020-2022
Measures					
	Refrigerator Thermometer	0	0	852	852
Installed kWh/year	Refrigerator Thermometer	0	0	0	0
	Refrigerator Thermometer	0	0	0	0
Installed Summer peak kW	Refrigerator Thermometer	0.0	0.0	0.0	0.0
	Refrigerator Thermometer	0.0	0.0	0.0	0.0
Installed Winter peak kW	Refrigerator Thermometer	-	-	0.0	0.0
	Refrigerator Thermometer	-	-	0.0	0.0
	Smart Thermostat Installation	0	0	163	163
Installed kWh/year	Smart Thermostat Installation	0	0	10,114	10,114
	Smart Thermostat Installation	0	0	9,103	9,103
Installed Summer peak kW	Smart Thermostat Installation	0.0	0.0	0.0	0.0
	Smart Thermostat Installation	0.0	0.0	0.0	0.0
Installed Winter peak kW	Smart Thermostat Installation	-	-	0.0	0.0
	Smart Thermostat Installation	-	-	0.0	0.0
	Water Heater Turndown 10 Degrees	0	0	589	589
Installed kWh/year	Water Heater Turndown 10 Degrees	0	0	30,646	30,646
	Water Heater Turndown 10 Degrees	0	0	27,581	27,581
Installed Summer peak kW	Water Heater Turndown 10 Degrees	0.0	0.0	3.5	3.5
	Water Heater Turndown 10 Degrees	0.0	0.0	3.1	3.1
Installed Winter peak kW	Water Heater Turndown 10 Degrees	-	-	3.5	3.5
	Water Heater Turndown 10 Degrees	-	-	3.1	3.1



VA - Residential Multifamily Program		2020	2021	2022	2020-2022
Measures					
	Hot Water Pipe Insulation	0	5	378	383
Installed kWh/year	Hot Water Pipe Insulation	0	241	28,059	28,300
	Hot Water Pipe Insulation	0	217	25,253	25,470
Installed Summer peak kW	Hot Water Pipe Insulation	0.0	0.0	3.2	3.2
	Hot Water Pipe Insulation	0.0	0.0	2.9	2.9
Installed Winter peak kW	Hot Water Pipe Insulation	-	0.0	3.2	3.2
	Hot Water Pipe Insulation	-	0.0	2.9	2.9
Installed kWh/year	HVAC Tune Up	0	0	1,465	1,465
	HVAC Tune Up	0	0	233,133	233,133
Installed Summer peak kW	HVAC Tune Up	0.0	0.0	87.6	87.6
	HVAC Tune Up	0.0	0.0	78.9	78.9
Installed Winter peak kW	HVAC Tune Up	-	-	135.6	135.6
	HVAC Tune Up	-	-	122.1	122.1
Installed kWh/year	Lighting	0	6	810	816
	Lighting	0	94	126,552	126,646
Installed Summer peak kW	Lighting	0.0	0.0	12.4	12.4
	Lighting	0.0	0.0	11.1	11.1
Installed Winter peak kW	Lighting	-	-	26.4	26.4
	Lighting	-	-	23.8	23.8
Installed kWh/year	Refrigerator Coil Brush	0	0	543	543
	Refrigerator Coil Brush	0	0	0	0
Installed Summer peak kW	Refrigerator Coil Brush	0.0	0.0	0.0	0.0
	Refrigerator Coil Brush	0.0	0.0	0.0	0.0
Installed Winter peak kW	Refrigerator Coil Brush	-	-	0.0	0.0
	Refrigerator Coil Brush	-	-	0.0	0.0



O.11.4 2020–2022 Virginia Residential Multifamily Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RMFP	Not available	234.909165	886	27% Not Available	Not Available	Not Available
RMFP	Schedule GS-1	220.57571	886	25%	18,532	1%
RMFP	Schedule 1G	134.748689	886	15%	12,098	1%
RMFP	Schedule 1	235.223848	886	27%	12,661	2%

O.11.5 2020-2022 Virginia Residential Multifamily Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Multifamily	2019	VA	PUR-2019-00201	136.42	1.31	2.22	1.31
Residential Multifamily	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Multifamily	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Multifamily	2022	VA	PUR-2022-00210	0.6	0.12	0.006	0.09
Residential Multifamily	2023	VA	EM&V Report	1.48	0.66	0.35	0.26



O.12 Virginia Residential Home Retrofit Program 2020–2022

O.12.1 2020–2022 Virginia Residential Home Retrofit Program Annual Indicator Tables

VA - Residential Home Retrofit Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$2,428	\$40,585	\$35,604	\$78,616
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$56,887	\$865,549	\$852,714	\$1,775,149
Costs (\$)		Planned	\$0	\$1,308,446	\$1,874,062	\$3,182,508
Costs (\$)		Variance	\$56,887	-\$442,897	-\$1,021,348	-\$1,407,359
		Annual % of Planned	N/A	66%	46%	56%
Participants ¹		Total (Gross)	0	99	50	149
		Planned	0	846	1,880	2,726
		Variance	0	-747	-1,830	-2,577
		Annual % of Planned (Gross)	N/A	12%	3%	5%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	207,565	127,675	335,240
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	207,565	127,675	335,240
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	-20,757	-12,767	-33,524
		Net Adjusted Savings (kWh/yr)	0	186,809	114,907	301,716
		Planned Net Savings (kWh/yr)	0	1,645,617	3,656,927	5,302,543
		Annual % Toward Planned Net Savings	N/A	11.4%	3.14%	5.69%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	2,097	2,553	2,250
		Avg. Net Savings Per Participant (kWh/yr)	N/A	1,887	2,298	2,025
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	68.4	30.1	98.4
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	68.4	30.1	98.4
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	-6.8	-3.0	-9.8
		Net Adjusted Demand Reduction (kW)	0.0	61.5	27.1	88.6
		Planned Net Savings (kW)	0.0	472.6	1,050.3	1,522.9
		Annual % Toward Planned Net Reduction	N/A	13.0%	2.58%	5.82%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.7	0.6	0.7
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.6	0.5	0.6
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	75.0	44.3	119.3
		Realization Rate Weighted by Measure	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	75.0	44.3	119.3
		Net-To-Gross Rate Weighted by Measure	-	90%	90%	90%
		Net-To-Gross Adjustment (kW)	-	-7.5	-4.4	-11.9
		Net Adjusted Demand Reduction (kW)	-	67.5	39.9	107.4
		Planned Net Savings (kW)	0.0	174.7	388.3	563.1
		Annual % Toward Planned Net Reduction	-	38.7%	10.3%	19.1%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.8	0.9	0.8
		Avg. Net Demand Reduction Per Participant (kW)	-	0.7	0.8	0.7
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$434	\$528	\$528
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	\$629	\$799	\$799
		Cum. \$EM&V per \$Total	90.6%	17.7%	17.8%	17.8%
		Cum. \$Rebate per Participant (Gross)	N/A	\$234	\$492	\$492



O.12.2 2022 Virginia Residential Home Retrofit Program Monthly Indicator Tables

VA - Residential Home Retrofit Program	Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2020-2022 Total
		Direct Rebate															
		Direct Implementation															
		Direct EIM&V															
		Capital (\$)		\$2,482	\$2,999	\$3,519	\$3,060	\$3,085	\$2,840	\$2,009	\$4,445	\$2,745	\$2,871	\$3,218	\$2,332	\$35,604	\$76,616
		Costs (\$)		\$59,436	\$71,820	\$84,282	\$73,299	\$73,875	\$68,012	\$48,121	\$106,458	\$65,735	\$68,762	\$77,060	\$55,854	\$652,744	\$1,775,149
		Planned		\$156,172	\$156,172	\$156,172	\$156,172	\$156,172	\$156,172	\$156,172	\$156,172	\$156,172	\$156,172	\$156,172	\$156,172	\$1,874,062	\$3,482,508
		Variance		-\$96,736	-\$84,352	-\$71,890	-\$82,873	-\$82,297	-\$88,159	-\$108,051	-\$90,714	-\$90,437	-\$87,409	-\$79,112	-\$100,316	-\$1,021,349	-\$1,407,359
		Annual % of Planned		3.2%	7.0%	11.5%	15.4%	19.4%	23.0%	25.6%	31.2%	34.7%	38.4%	42.5%	45.5%	46%	56%
		Total (Gross)		2	3	10	5	8	2	1	5	0	5	5	4	50	149
		Planned		164	156	156	156	156	156	156	156	156	156	156	156	1,880	2,726
		Variance		-162	-153	-146	-151	-148	-154	-155	-151	-156	-151	-151	-152	-1,830	-2,577
		Annual % of Planned (Gross)		0%	0%	0%	1%	1%	2%	2%	2%	2%	2%	2%	3%	3%	5%
		Total Gross Energy Savings (kWh/yr)		4,473	3,517	21,845	12,601	22,132	4,148	4,421	19,065	0	10,217	17,676	7,580	127,675	335,240
		Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	N/A	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)		4,473	3,517	21,845	12,601	22,132	4,148	4,421	19,065	0	10,217	17,676	7,580	127,675	335,240
		Net-To-Gross Rate Weighted by Measure		90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
		Net-To-Gross Adjustment (kWh/yr)		-447	-352	-2,185	-1,260	-2,213	-415	-442	-1,906	0	-1,022	-1,768	-758	-12,767	-33,524
		Net Adjusted Savings (kWh/yr)		4,026	3,165	19,661	11,341	19,919	3,733	3,979	17,159	0	9,195	15,908	6,822	114,907	301,716
		Planned Net Savings (kWh/yr)		\$19,008	\$30,347	\$303,447	\$303,447	\$303,447	\$303,447	\$303,447	\$303,447	\$303,447	\$303,447	\$303,447	\$303,447	\$3,655,927	\$5,302,943
		Annual % Toward Planned Net Savings		0.11%	0.20%	0.73%	0.4%	1.59%	1.69%	1.80%	2.27%	2.27%	2.52%	2.96%	3.14%	3.14%	5.69%
		Avg. Gross Savings Per Participant (kWh/yr)		2,236	1,172	2,185	2,520	2,767	2,074	4,421	3,813	N/A	2,043	3,535	1,895	2,553	2,250
		Avg. Net Savings Per Participant (kWh/yr)		2,013	1,055	1,966	2,268	2,490	1,867	3,979	3,432	N/A	1,839	3,182	1,705	2,298	2,025
		Total Gross Demand Reduction (kW)		1.1	0.7	4.8	3.0	4.6	0.9	1.1	4.3	0.0	3.4	3.8	2.3	30.1	98.4
		Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)		1.1	0.7	4.8	3.0	4.6	0.9	1.1	4.3	0.0	3.4	3.8	2.3	30.1	98.4
		Net-To-Gross Rate Weighted by Measure		90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
		Net-To-Gross Adjustment (kW)		-0.1	-0.1	-0.5	-0.3	-0.5	-0.1	-0.1	-0.4	0.0	-0.3	-0.4	-0.2	-3.0	-9.8
		Net Adjusted Demand Reduction (kW)		1.0	0.6	4.3	2.7	4.2	0.9	1.0	3.9	0.0	3.1	3.4	2.0	27.1	88.6
		Planned Net Savings (kW)		91.6	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	1,050.3	1,522.9
		Annual % Toward Planned Net Reduction		0.09%	0.15%	0.56%	0.82%	1.22%	1.30%	1.40%	1.76%	1.76%	2.05%	2.36%	2.56%	2.58%	5.82%
		Avg. Gross Demand Reduction Per Participant (kW)		0.54	0.24	0.48	0.61	0.58	0.47	1.1	0.86	N/A	0.68	0.76	0.57	0.6	0.7
		Avg. Net Demand Reduction Per Participant (kW)		0.5	0.2	0.4	0.5	0.5	0.4	1.0	0.8	N/A	0.6	0.7	0.5	0.5	0.6
		Total Gross Demand Reduction (kW)		2.0	0.9	7.3	4.4	7.4	1.2	1.8	6.7	0.0	4.2	5.8	2.5	44.3	119.3
		Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)		2.0	0.9	7.3	4.4	7.4	1.2	1.8	6.7	0.0	4.2	5.8	2.5	44.3	119.3
		Net-To-Gross Rate Weighted by Measure		90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
		Net-To-Gross Adjustment (kW)		-0.2	-0.1	-0.7	-0.4	-0.7	-0.1	-0.1	-0.6	0.0	-0.4	-0.6	-0.3	-4.4	-11.9
		Net Adjusted Demand Reduction (kW)		1.8	0.8	6.5	3.9	6.7	1.1	1.6	6.1	0.0	3.8	5.3	2.3	39.9	107.4
		Planned Net Savings (kW)		33.9	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	388.3	563.1
		Annual % Toward Planned Net Reduction		0.47%	0.67%	2.35%	3.37%	5.09%	5.38%	5.80%	7.36%	7.36%	8.33%	9.69%	10.3%	19.1%	19.1%
		Avg. Gross Demand Reduction Per Participant (kW)		1.0	0.3	0.7	0.9	0.9	0.6	1.8	1.3	N/A	0.8	1.2	0.6	0.9	0.8
		Avg. Net Demand Reduction Per Participant (kW)		0.9	0.3	0.7	0.8	0.8	0.6	1.6	1.2	N/A	0.8	1.1	0.6	0.8	0.7
		Cum. \$Admin. per Participant (Gross)		\$450	\$466	\$456	\$463	\$458	\$473	\$485	\$500	\$520	\$522	\$526	\$528	\$528	\$528
		Cum. \$Admin. per kWh/yr (Gross)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		Cum. \$Admin. per kW (Gross)		\$655	\$691	\$684	\$706	\$704	\$730	\$744	\$758	\$789	\$791	\$793	\$799	\$799	\$799
		Cum. \$EIM&V per \$Total		16.6%	16.7%	17.2%	17.3%	17.3%	17.5%	16.9%	18.2%	18.3%	18.3%	18.3%	18.3%	17.8%	17.8%
		Cum. \$Rebate per Participant (Gross)		\$246	\$257	\$315	\$344	\$371	\$385	\$393	\$447	\$447	\$451	\$491	\$492	\$492	\$492



O.12.3 2020–2022 Virginia Residential Home Retrofit Program Measure Indicator Tables

VA - Residential Home Retrofit Program			2020	2021	2022	2020-2022
Measures						
	Water Heater Replacement (Heat Pump)	Total Participants	0	0	0	0
Installed kWh/year	Water Heater Replacement (Heat Pump)	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Water Heater Replacement (Heat Pump)	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Water Heater Replacement (Heat Pump)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Water Heater Replacement (Heat Pump)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Water Heater Replacement (Heat Pump)	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Water Heater Replacement (Heat Pump)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0



VA - Residential Home Retrofit Program			2020	2021	2022	2020-2022
Measures						
	Hot Water Pipe Insulation	Total Participants	0	4	2	6
Installed kWh/year	Hot Water Pipe Insulation	Total Gross Energy Savings (kWh/yr)	0	501	494	995
	Hot Water Pipe Insulation	Net Adjusted Savings (kWh/yr)	0	451	444	896
Installed Summer peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	0.0	0.1	0.1	0.1
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.1	0.1
Installed Winter peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	-	0.1	0.1	0.1
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	-	0.1	0.1	0.1
	Lighting	Total Participants	0	10	6	16
Installed kWh/year	Lighting	Total Gross Energy Savings (kWh/yr)	0	1,931	4,484	6,415
	Lighting	Net Adjusted Savings (kWh/yr)	0	1,738	4,035	5,773
Installed Summer peak kW	Lighting	Total Gross Demand Reduction (kW)	0.0	0.1	0.3	0.4
	Lighting	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.3	0.4
Installed Winter peak kW	Lighting	Total Gross Demand Reduction (kW)	-	0.3	0.6	0.9
	Lighting	Net Adjusted Demand Reduction (kW)	-	0.3	0.6	0.8
	Smart Thermostat Installation	Total Participants	0	0	1	1
Installed kWh/year	Smart Thermostat Installation	Total Gross Energy Savings (kWh/yr)	0	0	689	689
	Smart Thermostat Installation	Net Adjusted Savings (kWh/yr)	0	0	621	621
Installed Summer peak kW	Smart Thermostat Installation	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Smart Thermostat Installation	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Smart Thermostat Installation	Total Gross Demand Reduction (kW)	-	-	0.0	0.0
	Smart Thermostat Installation	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0
	Water Distribution	Total Participants	0	6	1	7
Installed kWh/year	Water Distribution	Total Gross Energy Savings (kWh/yr)	0	524	748	1,272
	Water Distribution	Net Adjusted Savings (kWh/yr)	0	472	673	1,145
Installed Summer peak kW	Water Distribution	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.1
	Water Distribution	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.1
Installed Winter peak kW	Water Distribution	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.1
	Water Distribution	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.1



VA - Residential Home Retrofit Program			2020	2021	2022	2020-2022
Measures						
	Drill and Fill Wall Insulation	Total Participants	0	1	1	2
Installed kWh/year	Drill and Fill Wall Insulation	Total Gross Energy Savings (kWh/yr)	0	94	262	357
	Drill and Fill Wall Insulation	Net Adjusted Savings (kWh/yr)	0	85	236	321
Installed Summer peak kW	Drill and Fill Wall Insulation	Total Gross Demand Reduction (kW)	0.0	0.1	0.1	0.1
	Drill and Fill Wall Insulation	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.1	0.1
Installed Winter peak kW	Drill and Fill Wall Insulation	Total Gross Demand Reduction (kW)	-	0.0	0.2	0.2
	Drill and Fill Wall Insulation	Net Adjusted Demand Reduction (kW)	-	0.0	0.2	0.2
	Duct Insulation	Total Participants	0	0	1	1
Installed kWh/year	Duct Insulation	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Duct Insulation	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Duct Insulation	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Duct Insulation	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Duct Insulation	Total Gross Demand Reduction (kW)	-	-	0.0	0.0
	Duct Insulation	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0
	Duct Sealing	Total Participants	0	52	15	67
Installed kWh/year	Duct Sealing	Total Gross Energy Savings (kWh/yr)	0	30,189	17,750	47,939
	Duct Sealing	Net Adjusted Savings (kWh/yr)	0	27,170	15,975	43,145
Installed Summer peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	0.0	12.6	6.9	19.5
	Duct Sealing	Net Adjusted Demand Reduction (kW)	0.0	11.4	6.2	17.6
Installed Winter peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	-	13.3	8.2	21.5
	Duct Sealing	Net Adjusted Demand Reduction (kW)	-	12.0	7.3	19.4
	Heat Pump Upgrade	Total Participants	0	1	0	1
Installed kWh/year	Heat Pump Upgrade	Total Gross Energy Savings (kWh/yr)	0	1,388	0	1,388
	Heat Pump Upgrade	Net Adjusted Savings (kWh/yr)	0	1,249	0	1,249
Installed Summer peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	0.0	0.3	0.0	0.3
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	0.0	0.3	0.0	0.3
Installed Winter peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	-	0.7	0.0	0.7
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	-	0.6	0.0	0.6



VA - Residential Home Retrofit Program			2020	2021	2022	2020-2022
Measures						
	Air Sealing	Total Participants	0	33	40	73
Installed kWh/year	Air Sealing	Total Gross Energy Savings (kWh/yr)	0	6,591	23,299	29,889
	Air Sealing	Net Adjusted Savings (kWh/yr)	0	5,931	20,969	26,900
Installed Summer peak kW	Air Sealing	Total Gross Demand Reduction (kW)	0.0	1.5	3.3	4.8
	Air Sealing	Net Adjusted Demand Reduction (kW)	0.0	1.4	2.9	4.3
Installed Winter peak kW	Air Sealing	Total Gross Demand Reduction (kW)	-	4.5	15.6	20.1
	Air Sealing	Net Adjusted Demand Reduction (kW)	-	4.1	14.0	18.1
	Attic Insulation	Total Participants	0	85	45	130
Installed kWh/year	Attic Insulation	Total Gross Energy Savings (kWh/yr)	0	129,262	78,979	208,240
	Attic Insulation	Net Adjusted Savings (kWh/yr)	0	116,336	71,081	187,416
Installed Summer peak kW	Attic Insulation	Total Gross Demand Reduction (kW)	0.0	40.2	19.2	59.4
	Attic Insulation	Net Adjusted Demand Reduction (kW)	0.0	36.2	17.3	53.4
Installed Winter peak kW	Attic Insulation	Total Gross Demand Reduction (kW)	-	40.2	19.2	59.4
	Attic Insulation	Net Adjusted Demand Reduction (kW)	-	36.2	17.3	53.4
	Basement Wall Insulation	Total Participants	0	0	3	3
Installed kWh/year	Basement Wall Insulation	Total Gross Energy Savings (kWh/yr)	0	0	248	248
	Basement Wall Insulation	Net Adjusted Savings (kWh/yr)	0	0	224	224
Installed Summer peak kW	Basement Wall Insulation	Total Gross Demand Reduction (kW)	0.0	0.0	0.1	0.1
	Basement Wall Insulation	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.1	0.1
Installed Winter peak kW	Basement Wall Insulation	Total Gross Demand Reduction (kW)	-	-	0.1	0.1
	Basement Wall Insulation	Net Adjusted Demand Reduction (kW)	-	-	0.1	0.1
	Crawl Space Insulation	Total Participants	0	34	2	36
Installed kWh/year	Crawl Space Insulation	Total Gross Energy Savings (kWh/yr)	0	37,085	721	37,807
	Crawl Space Insulation	Net Adjusted Savings (kWh/yr)	0	33,377	649	34,026
Installed Summer peak kW	Crawl Space Insulation	Total Gross Demand Reduction (kW)	0.0	13.4	0.2	13.6
	Crawl Space Insulation	Net Adjusted Demand Reduction (kW)	0.0	12.0	0.2	12.3
Installed Winter peak kW	Crawl Space Insulation	Total Gross Demand Reduction (kW)	-	15.9	0.4	16.3
	Crawl Space Insulation	Net Adjusted Demand Reduction (kW)	-	14.3	0.4	14.7



O.12.4 2020–2022 Virginia Residential Home Retrofit Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpact	Net Systemwide Planned Savings (kWh/year)	Planned Savings	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RHRF	Not available	2024.939125	564	359%	Not Available	Not Available	10%
RHRF	Schedule 1S	2842.988919	564	504%	27,221	27,221	16%
RHRF	Schedule 1	2018.186259	564	521%	12,661	12,661	24%
RHRF	Schedule 1G	2940.657165	564	63%	12,098	12,098	Not Available
RHRF	Schedule 27	354.618796	564	Not Available	Not Available	Not Available	Not Available

O.12.5 2020–2022 Virginia Residential Home Retrofit Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Retrofit	2019	VA	PUR-2019-00201	4.9	2.2	1.76	0.52
Residential Retrofit	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Retrofit	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Retrofit	2022	VA	PUR-2022-00210	6.48	2.43	1.88	0.47
Residential Retrofit	2023	VA	EM&V Report	7.05	2.48	1.92	0.44



O.13 Virginia Residential Virtual Audit Program 2021-2022

O.13.1 2021-2022 Virginia Residential Virtual Audit Program Annual Indicator Tables

VA - Residential Virtual Energy Audit Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$209	\$27,770	\$27,980
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$4,465	\$665,100	\$669,566
Costs (\$)		Planned	\$0	\$4,205,740	\$4,205,740
Costs (\$)		Variance	\$4,465	-\$3,540,640	-\$3,536,175
		Annual % of Planned	N/A	16%	16%
Participants ¹		Total (Gross)	0	2,149	2,149
		Planned	0	56,400	56,400
		Variance	0	-54,251	-54,251
		Annual % of Planned (Gross)	N/A	4%	4%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	1,972,641	1,972,641
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	1,972,641	1,972,641
		Net-To-Gross Rate Weighted by Measure	N/A	60%	60%
		Net-To-Gross Adjustment (kWh/yr)	0	-789,056	-789,056
		Net Adjusted Savings (kWh/yr)	0	1,183,584	1,183,584
		Planned Net Savings (kWh/yr)	0	16,784,640	16,784,640
		Annual % Toward Planned Net Savings	N/A	7.05%	7.05%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	918	918
		Avg. Net Savings Per Participant (kWh/yr)	N/A	551	551
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	163.6	163.6
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	163.6	163.6
		Net-To-Gross Rate Weighted by Measure	N/A	60%	60%
		Net-To-Gross Adjustment (kW)	0.0	-65.4	-65.4
		Net Adjusted Demand Reduction (kW)	0.0	98.2	98.2
		Planned Net Savings (kW)	0.0	5,752.8	5,752.8
		Annual % Toward Planned Net Reduction	N/A	1.71%	1.71%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.08	0.08
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.05	0.05
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	269.3	269.3
		Realization Rate Weighted by Measure	-	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	269.3	269.3
		Net-To-Gross Rate Weighted by Measure	-	60%	60%
		Net-To-Gross Adjustment (kW)	-	-107.7	-107.7
		Net Adjusted Demand Reduction (kW)	-	161.6	161.6
		Planned Net Savings (kW)	0.0	3,722.4	3,722.4
		Annual % Toward Planned Net Reduction	-	4.34%	4.34%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.1	0.1
		Avg. Net Demand Reduction Per Participant (kW)	-	0.08	0.08
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$13	\$13
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.01	\$0.01
		Cum. \$Admin. per kW (Gross)	N/A	\$171	\$171
		Cum. \$EM&V per \$Total	0.0%	7.2%	7.2%
		Cum. \$Rebate per Participant (Gross)	N/A	\$119	\$119



O.13.2 2022 Virginia Residential Virtual Audit Program Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2021-2022 Total
VA - Residential Virtual Energy Audit Program	Direct Rebate		\$51	\$423	\$270	\$88	\$6,158	\$1,447	\$2,030	\$6,834	\$3,009	\$2,797	\$2,578	\$2,075	\$27,980
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct O&M		\$1,223	\$10,143	\$6,177	\$2,336	\$147,462	\$34,653	\$48,621	\$163,668	\$72,037	\$66,994	\$61,755	\$49,692	\$669,566
	Capital (\$)		\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462
Costs (\$)	Planned		\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462	\$359,462
	Variance		\$-358,239	\$-349,319	\$-352,985	\$-357,126	\$-211,980	\$-324,809	\$-310,840	\$-174,234	\$-265,845	\$-270,907	\$-276,147	\$-268,210	\$-268,210
Participants ¹	Annual % of Planned		0.0%	0.3%	0.4%	0.5%	4.0%	4.8%	6.0%	9.9%	11.6%	13.2%	14.6%	15.8%	16%
	Total (Gross)		0	0	0	0	0	0	176	969	303	255	161	255	2,149
Installed kWh/year	Planned		4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	56,400
	Variance		-4,700	-4,700	-4,700	-4,700	-4,700	-4,700	-4,524	-3,701	-4,397	-4,445	-4,539	-4,445	-54,251
Total	Annual % of Planned (Gross)		0%	0%	0%	0%	0%	0%	0%	2%	3%	3%	3%	4%	4%
	Total Gross Energy Savings (kWh/yr)		0	0	0	0	0	0	168,013	879,057	319,089	270,233	152,922	183,326	1,972,641
Realization Rate	Realization Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0
Net-To-Gross Rate	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	168,013	879,057	319,089	270,233	152,922	183,326	1,972,641
	Net-To-Gross Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	60%	60%	60%	60%	60%	60%	60%
Planned Net Savings	Net-To-Gross Adjusted Savings (kWh/yr)		0	0	0	0	0	0	-67,205	-351,623	-127,635	-108,093	-61,169	-73,331	-789,056
	Net Adjusted Savings (kWh/yr)		0	0	0	0	0	0	100,808	527,434	191,453	162,140	91,733	109,996	1,183,584
Annual % Toward Planned	Planned Net Savings (kWh/yr)		1,398,720	1,398,720	1,398,720	1,398,720	1,398,720	1,398,720	1,398,720	1,398,720	1,398,720	1,398,720	1,398,720	1,398,720	16,784,640
	Annual % Toward Planned Net Savings		0%	0%	0%	0%	0%	0%	0.60%	3.74%	4.88%	5.85%	6.40%	7.05%	7.05%
Avg. Gross Savings Per Participant	Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	965	860	1,053	1,060	950	719	918
	Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	573	528	632	636	570	431	551
Installed Summer peak kW	Total Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	13.7	74.6	25.2	21.9	12.8	15.4	163.6
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realization Rate	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	13.7	74.6	25.2	21.9	12.8	15.4	163.6
Net-To-Gross Rate	Net-To-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%
	Net-To-Gross Adjusted Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	-5.5	-29.8	-10.1	-8.8	-5.1	-6.2	-65.4
Planned Net Savings (kW)	Planned Net Savings (kW)		479.4	479.4	479.4	479.4	479.4	479.4	8.2	44.7	15.1	13.1	7.7	9.2	98.2
	Annual % Toward Planned Net Reduction		0%	0%	0%	0%	0%	0%	0.14%	0.92%	1.18%	1.41%	1.55%	1.71%	1.71%
Avg. Gross Demand Reduction Per Participant	Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	0.08	0.07	0.08	0.09	0.08	0.06	0.08
	Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	0.05	0.04	0.05	0.05	0.05	0.04	0.05
Installed Winter peak kW	Total Gross Demand Reduction (kW)		-	-	-	-	-	-	23.3	119.7	42.8	37.6	21.0	25.0	269.3
	Realization Rate Weighted by Measure		-	-	-	-	-	-	100%	100%	100%	100%	100%	100%	100%
Realization Rate	Realization Rate Adjustment (kW)		-	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)		-	-	-	-	-	-	23.3	119.7	42.8	37.6	21.0	25.0	269.3
Net-To-Gross Rate	Net-To-Gross Rate Weighted by Measure		-	-	-	-	-	-	60%	60%	60%	60%	60%	60%	60%
	Net-To-Gross Adjusted Demand Reduction (kW)		-	-	-	-	-	-	-9.3	-47.9	-17.1	-15.0	-8.4	-10.0	-107.7
Planned Net Savings (kW)	Planned Net Savings (kW)		310.2	310.2	310.2	310.2	310.2	310.2	14.0	71.8	25.7	22.5	12.6	15.0	161.6
	Annual % Toward Planned Net Reduction		-	-	-	-	-	-	0.36%	2.30%	2.99%	3.60%	3.94%	4.34%	4.34%
Avg. Gross Demand Reduction Per Participant	Avg. Gross Demand Reduction Per Participant (kW)		-	-	-	-	-	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Avg. Net Demand Reduction Per Participant (kW)		-	-	-	-	-	-	0.08	0.07	0.08	0.09	0.08	0.06	0.08
Program Performance	Cum. \$Admin. per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	\$61	\$15	\$14	\$13	\$14	\$13	\$13
	Cum. \$Admin. per kWh/year (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	\$0.06	\$0.02	\$0.02	\$0.01	\$0.01	\$0.01	\$0.01
	Cum. \$Admin. per kW (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	\$79	\$98	\$181	\$172	\$175	\$171	\$171
	Cum. \$EM&V per \$Total		0.0%	52.2%	60.2%	60.1%	9.5%	8.7%	7.0%	4.9%	5.0%	5.6%	7.8%	7.2%	7.2%
Cum. \$Rebate per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	\$122	\$117	\$120	\$121	\$121	\$119	\$119	



O.13.3 2021-2022 Virginia Residential Virtual Audit Program Measure Indicator Tables

VA - Residential Virtual Energy Audit Program			2021	2022	2021-2022
Measures					
	Window Weatherstripping	Total Participants	0	481	481
Installed kWh/year	Window Weatherstripping	Total Gross Energy Savings (kWh/yr)	0	1,649	1,649
	Window Weatherstripping	Net Adjusted Savings (kWh/yr)	0	989	989
Installed Summer peak kW	Window Weatherstripping	Total Gross Demand Reduction (kW)	0.0	0.2	0.2
	Window Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.1
Installed Winter peak kW	Window Weatherstripping	Total Gross Demand Reduction (kW)	-	1.9	1.9
	Window Weatherstripping	Net Adjusted Demand Reduction (kW)	-	1.1	1.1

VA - Residential Virtual Energy Audit Program			2021	2022	2021-2022
Measures					
	Lighting	Total Participants	0	1,850	1,850
Installed kWh/year	Lighting	Total Gross Energy Savings (kWh/yr)	0	706,260	706,260
	Lighting	Net Adjusted Savings (kWh/yr)	0	423,756	423,756
Installed Summer peak kW	Lighting	Total Gross Demand Reduction (kW)	0.0	64.6	64.6
	Lighting	Net Adjusted Demand Reduction (kW)	0.0	38.8	38.8
Installed Winter peak kW	Lighting	Total Gross Demand Reduction (kW)	-	138.1	138.1
	Lighting	Net Adjusted Demand Reduction (kW)	-	82.9	82.9
	Outlet/Switch Gaskets	Total Participants	0	481	481
Installed kWh/year	Outlet/Switch Gaskets	Total Gross Energy Savings (kWh/yr)	0	1,270	1,270
	Outlet/Switch Gaskets	Net Adjusted Savings (kWh/yr)	0	762	762
Installed Summer peak kW	Outlet/Switch Gaskets	Total Gross Demand Reduction (kW)	0.0	0.2	0.2
	Outlet/Switch Gaskets	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.1
Installed Winter peak kW	Outlet/Switch Gaskets	Total Gross Demand Reduction (kW)	-	1.4	1.4
	Outlet/Switch Gaskets	Net Adjusted Demand Reduction (kW)	-	0.9	0.9
	Smart Strips	Total Participants	0	2,087	2,087
Installed kWh/year	Smart Strips	Total Gross Energy Savings (kWh/yr)	0	234,266	234,266
	Smart Strips	Net Adjusted Savings (kWh/yr)	0	140,559	140,559
Installed Summer peak kW	Smart Strips	Total Gross Demand Reduction (kW)	0.0	20.6	20.6
	Smart Strips	Net Adjusted Demand Reduction (kW)	0.0	12.4	12.4
Installed Winter peak kW	Smart Strips	Total Gross Demand Reduction (kW)	-	20.6	20.6
	Smart Strips	Net Adjusted Demand Reduction (kW)	-	12.4	12.4
	Water Distribution	Total Participants	0	1,350	1,350
Installed kWh/year	Water Distribution	Total Gross Energy Savings (kWh/yr)	0	726,881	726,881
	Water Distribution	Net Adjusted Savings (kWh/yr)	0	436,128	436,128
Installed Summer peak kW	Water Distribution	Total Gross Demand Reduction (kW)	0.0	42.7	42.7
	Water Distribution	Net Adjusted Demand Reduction (kW)	0.0	25.6	25.6
Installed Winter peak kW	Water Distribution	Total Gross Demand Reduction (kW)	-	42.7	42.7
	Water Distribution	Net Adjusted Demand Reduction (kW)	-	25.6	25.6



VA - Residential Virtual Energy Audit Program			2021	2022	2021-2022
Measures					
	Caulking per Tube	Total Participants	0	481	481
Installed kWh/year	Caulking per Tube	Total Gross Energy Savings (kWh/yr)	0	3,298	3,298
	Caulking per Tube	Net Adjusted Savings (kWh/yr)	0	1,979	1,979
Installed Summer peak kW	Caulking per Tube	Total Gross Demand Reduction (kW)	0.0	0.5	0.5
	Caulking per Tube	Net Adjusted Demand Reduction (kW)	0.0	0.3	0.3
Installed Winter peak kW	Caulking per Tube	Total Gross Demand Reduction (kW)	-	3.7	3.7
	Caulking per Tube	Net Adjusted Demand Reduction (kW)	-	2.2	2.2
	Door Sweep	Total Participants	0	481	481
Installed kWh/year	Door Sweep	Total Gross Energy Savings (kWh/yr)	0	24,575	24,575
	Door Sweep	Net Adjusted Savings (kWh/yr)	0	14,745	14,745
Installed Summer peak kW	Door Sweep	Total Gross Demand Reduction (kW)	0.0	3.4	3.4
	Door Sweep	Net Adjusted Demand Reduction (kW)	0.0	2.0	2.0
Installed Winter peak kW	Door Sweep	Total Gross Demand Reduction (kW)	-	27.8	27.8
	Door Sweep	Net Adjusted Demand Reduction (kW)	-	16.7	16.7
	Door Weatherstripping	Total Participants	0	481	481
Installed kWh/year	Door Weatherstripping	Total Gross Energy Savings (kWh/yr)	0	1,649	1,649
	Door Weatherstripping	Net Adjusted Savings (kWh/yr)	0	989	989
Installed Summer peak kW	Door Weatherstripping	Total Gross Demand Reduction (kW)	0.0	0.2	0.2
	Door Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.1
Installed Winter peak kW	Door Weatherstripping	Total Gross Demand Reduction (kW)	-	1.9	1.9
	Door Weatherstripping	Net Adjusted Demand Reduction (kW)	-	1.1	1.1
	Hot Water Pipe Insulation	Total Participants	0	1,350	1,350
Installed kWh/year	Hot Water Pipe Insulation	Total Gross Energy Savings (kWh/yr)	0	272,793	272,793
	Hot Water Pipe Insulation	Net Adjusted Savings (kWh/yr)	0	163,676	163,676
Installed Summer peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	0.0	31.1	31.1
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.0	18.7	18.7
Installed Winter peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	-	31.1	31.1
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	-	18.7	18.7

O.13.4 2021-2022 Virginia Residential Virtual Audit Program Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	Average Net Impact Per Part	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RVAU	Not available	550.760495	469	117%	Not Available	Not Available
RVAU	Schedule 1T	545.364913	469	116%	17,981	3%
RVAU	Schedule 1	551.957146	469	118%	12,661	4%
RVAU	Schedule 1G	514.791642	469	110%	12,098	4%
RVAU	Schedule 1EV	294.200828	469	63%	18,438	2%
RVAU	Schedule 1S	500.021563	469	107%	27,221	2%
RVAU	Schedule 28	554.59489	469	118%	Not Available	Not Available



O.13.5 2021-2022 Virginia Residential Virtual Audit Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Virtual Energy Audit	2020	VA	PUR-2020-00274	21.36	2.94	6.03	0.48
Residential Virtual Energy Audit	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Virtual Energy Audit	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Residential Virtual Energy Audit	2023	VA	EM&V Report	61.15	4.07	8.08	0.26

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O.14 Virginia Residential New Construction Program 2020–2022

O.14.1 2020–2022 Virginia Residential New Construction Program Annual Indicator Tables

VA - Residential New Construction Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$1,284	\$56,428	\$112,259	\$169,970
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$30,084	\$1,203,424	\$2,688,603	\$3,922,111
Costs (\$)		Planned	\$0	\$4,218,145	\$4,560,431	\$8,778,576
Costs (\$)		Variance	\$30,084	-\$3,014,721	-\$1,871,828	-\$4,856,465
		Annual % of Planned	N/A	29%	59%	45%
Participants ¹		Total (Gross)	0	1,018	2,560	3,578
		Planned	0	4,250	4,548	8,798
		Variance	0	-3,232	-1,988	-5,220
		Annual % of Planned (Gross)	N/A	24%	56%	41%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	1,971,437	5,129,363	7,100,800
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	1,971,437	5,129,363	7,100,800
		Net-To-Gross Rate Weighted by Measure	N/A	87%	87%	87%
		Net-To-Gross Adjustment (kWh/yr)	0	-256,287	-666,817	-923,104
		Net Adjusted Savings (kWh/yr)	0	1,715,150	4,462,546	6,177,696
		Planned Net Savings (kWh/yr)	0	5,926,305	6,341,844	12,268,149
		Annual % Toward Planned Net Savings	N/A	28.9%	70.4%	50.4%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	1,937	2,004	1,985
		Avg. Net Savings Per Participant (kWh/yr)	N/A	1,685	1,743	1,727
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	883.5	2,285.0	3,168.4
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	883.5	2,285.0	3,168.4
		Net-To-Gross Rate Weighted by Measure	N/A	87%	87%	87%
		Net-To-Gross Adjustment (kW)	0.0	-114.9	-297.0	-411.9
		Net Adjusted Demand Reduction (kW)	0.0	768.6	1,987.9	2,756.5
		Planned Net Savings (kW)	0.0	3,290.8	3,521.5	6,812.3
		Annual % Toward Planned Net Reduction	N/A	23.4%	56.5%	40.5%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.9	0.9	0.9
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.8	0.8	0.8
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	342.6	969.7	1,312.3
		Realization Rate Weighted by Measure	-	-	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	342.6	969.7	1,312.3
		Net-To-Gross Rate Weighted by Measure	-	87%	87%	87%
		Net-To-Gross Adjustment (kW)	-	-44.5	-126.1	-170.6
		Net Adjusted Demand Reduction (kW)	-	298.1	843.7	1,141.7
		Planned Net Savings (kW)	-	998.3	1,068.3	2,066.7
		Annual % Toward Planned Net Reduction	-	29.9%	79.0%	55.2%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.3	0.4	0.4
		Avg. Net Demand Reduction Per Participant (kW)	-	0.3	0.3	0.3
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$57	\$48	\$48
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.03	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	N/A	\$65	\$54	\$54
		Cum. \$EM&V per \$Total	74.6%	9.7%	7.9%	7.9%
		Cum. \$Rebate per Participant (Gross)	N/A	\$838	\$837	\$837



O.14.2 2022 Virginia Residential New Construction Program Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2020-2022 Total	
VA - Residential New Construction Program	Direct Rebate																
	O&M (\$)																
	O&M (\$)																
	O&M (\$)																
	Capital (\$)																
	Costs (\$)																
	Costs (\$)																
	Costs (\$)																
	Costs (\$)																
	Costs (\$)																
Participants ¹	Total (Gross)		233	148	231	195	272	238	231	220	202	202	268	0	2,560	3,578	
	Planned		379	379	379	379	379	379	379	379	379	379	379	379	379	4,548	
	Variance		-146	-231	-148	-184	-107	-141	-148	-159	-87	-147	-111	-379	-379	8,798	
	Annual % of Planned (Gross)		5%	8%	13%	18%	24%	29%	34%	38%	45%	50%	56%	56%	56%	41%	
	Total Gross Energy Savings (kWh/yr)		399,906	284,026	442,105	331,006	465,585	446,398	501,143	643,321	556,250	593,028	0	5,129,363	7,100,800		
	Realization Rate Adjusted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	100%	
	Realization Rate Adjusted (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Adjusted Savings (kWh/yr)		399,906	284,026	442,105	331,006	465,585	446,398	501,143	643,321	556,250	593,028	0	5,129,363	7,100,800		
	Net-To-Gross Rate Weighted by Measure		87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	N/A	87%	
	Net-To-Gross Adjusted (kWh/yr)		-51,988	-36,923	-57,474	-43,031	-60,526	-60,657	-58,032	-65,149	-83,632	-72,312	-77,094	0	-666,817	-923,104	
Planned Net Savings (kWh/yr)		528,487	528,487	528,487	528,487	528,487	528,487	528,487	528,487	528,487	528,487	528,487	528,487	528,487	528,487	6,177,696	
Annual % Toward Planned Net Savings		5.49%	9.38%	15.4%	20.0%	26.4%	32.8%	38.9%	45.8%	54.6%	62.2%	70.4%	70.4%	70.4%	70.4%	50.4%	
Avg. Gross Savings Per Participant (kWh/yr)		1,716	1,919	1,914	1,697	1,712	1,960	1,932	2,278	2,203	2,398	2,213	N/A	2,004	1,985		
Avg. Net Savings Per Participant (kWh/yr)		1,493	1,670	1,665	1,477	1,489	1,706	1,681	1,982	1,917	2,086	1,925	N/A	1,743	1,727		
Installed Summer peak kW	Total		180.8	144.2	201.2	160.2	211.2	207.2	195.7	211.6	272.5	244.0	256.3	0.0	2,285.0	3,168.4	
	Realization Rate Adjusted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		180.8	144.2	201.2	160.2	211.2	207.2	195.7	211.6	272.5	244.0	256.3	0.0	2,285.0	3,168.4	
	Net-To-Gross Rate Weighted by Measure		87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	
	Net-To-Gross Adjusted (kW)		-23.5	-18.7	-26.0	-20.8	-27.5	-26.9	-25.4	-27.5	-35.4	-31.7	-33.3	0.0	-297.0	-411.9	
	Planned Net Savings (kW)		157.3	125.4	175.0	139.3	183.8	180.3	170.3	184.1	237.1	212.3	222.9	0.0	1,987.9	2,756.5	
	Annual % Toward Planned Net Reduction		4.47%	8.03%	13.0%	17.0%	22.2%	27.3%	32.1%	37.4%	44.1%	50.1%	56.5%	56.5%	56.5%	40.5%	
	Avg. Gross Demand Reduction Per Participant (kW)		0.78	0.97	0.87	0.82	0.78	0.87	0.85	0.96	0.93	1.1	0.96	N/A	0.9	0.9	
	Avg. Net Demand Reduction Per Participant (kW)		0.7	0.8	0.8	0.7	0.7	0.8	0.7	0.8	0.8	0.9	0.8	N/A	0.8	0.8	
Installed Winter peak kW	Total		70.6	43.0	77.4	52.8	79.1	92.9	86.6	105.3	135.3	104.1	122.6	-	969.7	1,312.3	
	Realization Rate Adjusted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		70.6	43.0	77.4	52.8	79.1	92.9	86.6	105.3	135.3	104.1	122.6	-	969.7	1,312.3	
	Net-To-Gross Rate Weighted by Measure		87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	
	Net-To-Gross Adjusted (kW)		-9.2	-5.6	-10.1	-6.9	-10.3	-12.1	-11.3	-13.7	-17.6	-13.5	-15.9	-	-126.1	-170.6	
	Planned Net Savings (kW)		89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	1,487.9
	Annual % Toward Planned Net Reduction		5.75%	9.25%	15.6%	19.9%	26.3%	33.9%	40.9%	49.5%	60.5%	69.0%	79.0%	79.0%	79.0%	56.2%	
	Avg. Gross Demand Reduction Per Participant (kW)		0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.4	0.5	-	0.4	0.4
	Avg. Net Demand Reduction Per Participant (kW)		0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	-	0.3	0.3
Program Performance	Cum. \$Admin. per Participant (Gross)		\$54	\$54	\$52	\$51	\$49	\$49	\$48	\$48	\$48	\$48	\$47	\$48	\$48	\$48	
	Cum. \$Admin. per kWh/yr (Gross)		\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	
	Cum. \$EM&V per kWh (Gross)		\$63	\$62	\$60	\$59	\$58	\$57	\$56	\$56	\$56	\$55	\$54	\$54	\$54	\$54	
	Cum. \$EM&V per \$1 total		8.2%	8.0%	7.9%	7.7%	7.3%	7.2%	6.6%	7.7%	7.5%	7.6%	7.9%	7.9%	7.9%	7.9%	
	Cum. \$Rebate per Participant (Gross)		\$635	\$640	\$640	\$638	\$634	\$636	\$635	\$636	\$635	\$637	\$637	\$637	\$637	\$637	
	Cum. \$Rebate per kWh/yr (Gross)		\$8.2%	\$8.0%	\$8.0%	\$7.9%	\$7.3%	\$7.2%	\$6.6%	\$7.7%	\$7.5%	\$7.6%	\$7.9%	\$7.9%	\$7.9%	\$7.9%	



O.14.3 2020–2022 Virginia Residential New Construction Program Measure Indicator Tables

VA - Residential New Construction Program		2020	2021	2022	2020-2022
Measures					
Attached Housing	Total Participants	0	556	1,400	1,956
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	711,234	2,062,567	2,773,801
Attached Housing	Net Adjusted Savings (kWh/yr)	0	618,773	1,794,434	2,413,207
Installed Summer peak kW	Total Gross Demand Reduction (kW)	0.0	256.4	758.3	1,014.7
Attached Housing	Net Adjusted Demand Reduction (kW)	0.0	223.0	659.7	882.8
Installed Winter peak kW	Total Gross Demand Reduction (kW)	-	139.1	422.2	561.3
Attached Housing	Net Adjusted Demand Reduction (kW)	-	121.0	367.3	488.3
Single Family	Total Participants	0	462	1,160	1,622
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	1,260,203	3,066,796	4,326,999
Single Family	Net Adjusted Savings (kWh/yr)	0	1,096,377	2,668,112	3,764,489
Installed Summer peak kW	Total Gross Demand Reduction (kW)	0.0	627.1	1,526.7	2,153.8
Single Family	Net Adjusted Demand Reduction (kW)	0.0	545.6	1,328.2	1,873.8
Installed Winter peak kW	Total Gross Demand Reduction (kW)	-	203.5	547.6	751.1
Single Family	Net Adjusted Demand Reduction (kW)	-	177.1	476.4	653.4

O.14.4 2020–2022 Virginia Residential New Construction Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RNCR	Not available	1726.577869	1,394	124%	Not Available	Not Available
RNCR	Not Available	1726.577869	1,394	124%	Not Available	Not Available

O.14.5 2020–2022 Virginia Residential New Construction Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential New Construction	2019	VA	PUR-2019-00201	1.73	2.11	1.25	0.69
Residential New Construction	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential New Construction	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential New Construction	2022	VA	PUR-2022-00210	2.73	1.88	1.07	0.43
Residential New Construction	2023	VA	EM&V Report	3.33	2.09	1.21	0.4



O.15 Virginia Residential HVAC Health and Safety Program 2020–2022

O.15.1 2020-2022 Virginia Residential HVAC Health and Safety Program Annual Indicator Tables

VA - Residential HVAC Health and Safety Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$2,122	\$426,441	\$509,068	\$937,630
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$49,722	\$9,094,648	\$12,192,181	\$21,336,551
Costs (\$)		Planned	\$0	\$10,821,869	\$10,948,523	\$21,770,392
Costs (\$)		Variance	\$49,722	-\$1,727,220	\$1,243,658	-\$433,841
		Annual % of Planned	N/A	84%	111%	98%
Participants ¹		Total (Gross)	0	3,361	3,661	7,022
		Planned	0	8,791	8,791	17,582
		Variance	0	-5,430	-5,130	-10,560
		Annual % of Planned (Gross)	N/A	38%	42%	40%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	1,341,418	999,178	2,340,596
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	1,341,418	999,178	2,340,596
		Net-To-Gross Rate Weighted by Measure	N/A	80%	80%	80%
		Net-To-Gross Adjustment (kWh/yr)	0	-268,284	-199,836	-468,119
		Net Adjusted Savings (kWh/yr)	0	1,073,134	799,342	1,872,477
		Planned Net Savings (kWh/yr)	0	5,802,060	5,802,060	11,604,120
		Annual % Toward Planned Net Savings	N/A	18.5%	13.8%	16.1%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	399	273	333
		Avg. Net Savings Per Participant (kWh/yr)	N/A	319	218	267
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	200.2	194.1	394.3
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	200.2	194.1	394.3
		Net-To-Gross Rate Weighted by Measure	N/A	80%	80%	80%
		Net-To-Gross Adjustment (kW)	0.0	-40.0	-38.8	-78.9
		Net Adjusted Demand Reduction (kW)	0.0	160.2	155.3	315.4
		Planned Net Savings (kW)	0.0	6,841.6	6,841.6	13,683.3
		Annual % Toward Planned Net Reduction	N/A	2.34%	2.27%	2.31%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.06	0.05	0.06
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.05	0.04	0.04
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	295.0	296.2	591.1
		Realization Rate Weighted by Measure	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	295.0	296.2	591.1
		Net-To-Gross Rate Weighted by Measure	-	80%	80%	80%
		Net-To-Gross Adjustment (kW)	-	-59.0	-59.2	-118.2
		Net Adjusted Demand Reduction (kW)	-	236.0	237.0	472.9
		Planned Net Savings (kW)	0.0	2,473.7	2,473.7	4,947.4
		Annual % Toward Planned Net Reduction	-	9.54%	9.58%	9.56%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.09	0.08	0.08
		Avg. Net Demand Reduction Per Participant (kW)	-	0.07	0.06	0.07
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$128	\$134	\$134
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	\$2,141	\$2,378	\$2,378
		Cum. \$EM&V per \$Total	93.0%	2.3%	1.7%	1.7%
		Cum. \$Rebate per Participant (Gross)	N/A	\$2,141	\$2,433	\$2,433



O.15.2 2022 Virginia Residential HVAC Health and Safety Program Monthly Indicator Tables

Category	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2020-2022 Total
VA - Residential HVAC Health and Safety Program Measure	Direct Rebate														
	Direct Implementation														
	Direct EM&V														
	Indirect Other (Administrative)														
O&M (\$)	\$6,618	\$67,393	\$45,751	\$16,644	\$48,480	\$53,215	\$14,907	\$34,481	\$17,055	\$63,607	\$106,848	\$34,071	\$509,068	\$937,630	
O&M (\$)															
Capital (\$)															
Costs (\$)	\$158,503	\$1,614,060	\$1,995,742	\$398,615	\$1,161,085	\$1,274,501	\$557,016	\$285,011	\$408,467	\$1,523,379	\$2,558,998	\$616,005	\$12,192,181	\$21,336,551	
Costs (\$)	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	\$912,377	
Costs (\$)	\$753,874	\$701,683	\$183,365	\$61,137	\$248,708	\$382,124	\$555,361	\$86,566	\$503,910	\$611,002	\$1,646,621	\$86,372	\$10,948,623	\$21,770,992	
	1.4%	16.2%	28.2%	29.8%	40.4%	52.1%	55.3%	62.9%	66.6%	80.5%	103.9%	111.4%	111.4%	98%	
Participants ¹															
Total (Gross)		29	469	191	154	171	800	170	355	129	324	291	578	3,661	
Planned		739	732	732	732	732	732	732	732	732	732	732	732	8,791	
Variance		-710	-263	-541	-578	-561	68	-562	-377	-603	-408	-441	-154	-5,130	
Annual % of Planned (Gross)		0%	6%	8%	10%	12%	21%	23%	27%	28%	32%	35%	42%	40%	
Total Gross Energy Savings (kWh/yr)		47,269	122,691	102,948	57,971	78,653	184,653	46,609	48,647	34,166	71,811	114,476	89,283	999,178	
Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	
Realization Rate Adjusted Savings (kWh/yr)		47,269	122,691	102,948	57,971	78,653	184,653	46,609	48,647	34,166	71,811	114,476	89,283	999,178	
Net-To-Gross Rate Weighted by Measure		80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	
Net-To-Gross Adjustment (kWh/yr)		-9,454	-24,538	-20,590	-11,594	-15,731	-36,931	-9,322	-9,729	-6,833	-14,362	-22,895	-17,857	-199,836	
Net Adjusted Savings (kWh/yr)		37,815	98,153	82,358	46,377	62,922	147,723	37,288	38,918	27,333	57,449	91,581	71,426	799,342	
Planned Net Savings (kWh/yr)		487,740	483,120	483,120	483,120	483,120	483,120	483,120	483,120	483,120	483,120	483,120	483,120	5,802,060	
Annual % Toward Planned Net Savings		0.65%	2.34%	3.76%	4.96%	5.65%	8.19%	8.64%	9.51%	9.98%	11.0%	12.9%	13.8%	16.1%	
Avg. Gross Savings Per Participant (kWh/yr)		1,630	262	539	376	460	231	274	137	265	222	383	154	273	
Avg. Net Savings Per Participant (kWh/yr)		1,304	209	431	301	388	185	219	110	212	177	315	124	218	
Installed Summer peak kW															
Total		14.2	21.4	25.0	10.0	12.8	19.1	3.2	9.5	6.9	23.4	25.2	24.3	194.1	
Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Realization Rate Adjusted Gross Demand Reduction (kW)		14.2	21.4	25.0	10.0	12.8	19.1	3.2	9.5	6.9	23.4	25.2	24.3	194.1	
Net-To-Gross Rate Weighted by Measure		80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	
Net-To-Gross Adjustment (kW)		-2.8	-4.3	-5.0	-2.0	-2.6	-3.8	-0.6	-1.9	-1.2	-4.7	-5.0	-4.9	-38.8	
Net Adjusted Demand Reduction (kW)		11.4	17.1	20.0	8.0	10.2	15.3	2.6	7.6	4.7	18.7	20.2	19.4	155.3	
Planned Net Savings (kW)		575.1	569.7	569.7	569.7	569.7	569.7	569.7	569.7	569.7	569.7	569.7	569.7	6,841.6	
Annual % Toward Planned Net Reduction		0.17%	0.42%	0.71%	0.83%	0.98%	1.20%	1.24%	1.35%	1.42%	1.89%	1.99%	2.27%	2.27%	
Avg. Gross Demand Reduction Per Participant (kW)		0.49	0.05	0.13	0.07	0.07	0.02	0.02	0.03	0.05	0.06	0.07	0.09	0.04	
Avg. Net Demand Reduction Per Participant (kW)		0.4	0.04	0.1	0.05	0.06	0.02	0.02	0.02	0.04	0.06	0.07	0.03	0.05	
Installed Winter peak kW															
Total		28.3	33.6	39.5	13.5	21.6	33.1	12.9	19.9	14.1	20.9	38.1	20.8	296.2	
Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Realization Rate Adjusted Gross Demand Reduction (kW)		28.3	33.6	39.5	13.5	21.6	33.1	12.9	19.9	14.1	20.9	38.1	20.8	296.2	
Net-To-Gross Rate Weighted by Measure		80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	
Net-To-Gross Adjustment (kW)		-5.7	-6.7	-7.9	-2.7	-4.0	-6.6	-2.6	-4.2	-3.0	-10.2	-11.2	-10.8	-89.2	
Net Adjusted Demand Reduction (kW)		22.6	26.9	31.6	10.8	17.3	26.5	10.3	15.9	11.3	16.7	30.5	16.6	207.0	
Planned Net Savings (kW)		207.9	206.0	206.0	206.0	206.0	206.0	206.0	206.0	206.0	206.0	206.0	206.0	2,473.7	
Annual % Toward Planned Net Reduction		0.91%	2.00%	3.28%	3.72%	4.41%	5.69%	5.80%	6.54%	7.00%	7.88%	8.91%	9.58%	9.58%	
Avg. Gross Demand Reduction Per Participant (kW)		1.0	0.07	0.2	0.09	0.1	0.04	0.08	0.06	0.1	0.06	0.1	0.04	0.08	
Avg. Net Demand Reduction Per Participant (kW)		0.8	0.06	0.2	0.07	0.1	0.03	0.06	0.04	0.09	0.05	0.1	0.03	0.06	
Program Performance															
Cum. \$Admin. per Participant (Gross)		\$128	\$130	\$135	\$134	\$140	\$129	\$128	\$126	\$128	\$129	\$140	\$134	\$134	
Cum. \$Admin. per kWh/yr (Gross)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Cum. \$Admin. per kW (Gross)		\$2,028	\$2,131	\$2,102	\$2,086	\$2,202	\$2,228	\$2,270	\$2,281	\$2,311	\$2,311	\$2,442	\$2,378	\$2,378	
Cum. \$EM&V per \$Total		2.3%	2.1%	2.0%	2.0%	2.0%	1.9%	1.9%	2.0%	2.0%	1.9%	1.8%	1.7%	1.7%	
Cum. \$Rebate per Participant (Gross)		\$2,155	\$2,236	\$2,351	\$2,337	\$2,461	\$2,281	\$2,226	\$2,237	\$2,237	\$2,323	\$2,547	\$2,433	\$2,433	



O.15.3 2020–2022 Virginia Residential HVAC Health and Safety Program Measure Indicator Tables

VA - Residential HVAC Health and Safety Program			2020	2021	2022	2020-2022
Measures						
	Thermostat replacement	Total Participants	0	2,936	3,299	6,235
Installed kWh/year	Thermostat replacement	Total Gross Energy Savings (kWh/yr)	0	792,203	381,340	1,173,543
	Thermostat replacement	Net Adjusted Savings (kWh/yr)	0	633,763	305,072	938,834
Installed Summer peak kW	Thermostat replacement	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Thermostat replacement	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Thermostat replacement	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Thermostat replacement	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0

VA - Residential HVAC Health and Safety Program			2020	2021	2022	2020-2022
Measures						
	Insulation repair/upgrade wall	Total Participants	0	14	87	101
Installed kWh/year	Insulation repair/upgrade wall	Total Gross Energy Savings (kWh/yr)	0	1,466	6,318	7,784
	Insulation repair/upgrade wall	Net Adjusted Savings (kWh/yr)	0	1,173	5,054	6,227
Installed Summer peak kW	Insulation repair/upgrade wall	Total Gross Demand Reduction (kW)	0.0	0.5	1.5	1.9
	Insulation repair/upgrade wall	Net Adjusted Demand Reduction (kW)	0.0	0.4	1.2	1.6
Installed Winter peak kW	Insulation repair/upgrade wall	Total Gross Demand Reduction (kW)	-	1.0	6.0	7.0
	Insulation repair/upgrade wall	Net Adjusted Demand Reduction (kW)	-	0.8	4.8	5.6
	Mold/mildew removal	Total Participants	0	1	7	8
Installed kWh/year	Mold/mildew removal	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Mold/mildew removal	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Mold/mildew removal	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Mold/mildew removal	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Mold/mildew removal	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Mold/mildew removal	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Re-wiring	Total Participants	0	13	39	52
Installed kWh/year	Re-wiring	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Re-wiring	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Re-wiring	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Re-wiring	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Re-wiring	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Re-wiring	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Roof repairs	Total Participants	0	11	21	32
Installed kWh/year	Roof repairs	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Roof repairs	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Roof repairs	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Roof repairs	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Roof repairs	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Roof repairs	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0



VA - Residential HVAC Health and Safety Program			2020	2021	2022	2020-2022
Measures						
	Heat Pump Upgrade	Total Participants	0	752	1,039	1,791
Installed kWh/year	Heat Pump Upgrade	Total Gross Energy Savings (kWh/yr)	0	247,643	369,269	616,912
	Heat Pump Upgrade	Net Adjusted Savings (kWh/yr)	0	198,115	295,415	493,530
Installed Summer peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	0.0	105.5	96.7	202.2
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	0.0	84.4	77.4	161.8
Installed Winter peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	-	133.1	196.2	329.3
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	-	106.5	156.9	263.4
	HVAC / home ventilation improvements	Total Participants	0	167	94	261
Installed kWh/year	HVAC / home ventilation improvements	Total Gross Energy Savings (kWh/yr)	0	5,849	36,324	42,172
	HVAC / home ventilation improvements	Net Adjusted Savings (kWh/yr)	0	4,679	29,059	33,738
Installed Summer peak kW	HVAC / home ventilation improvements	Total Gross Demand Reduction (kW)	0.0	0.7	4.2	4.9
	HVAC / home ventilation improvements	Net Adjusted Demand Reduction (kW)	0.0	0.6	3.3	3.9
Installed Winter peak kW	HVAC / home ventilation improvements	Total Gross Demand Reduction (kW)	-	0.7	4.2	4.9
	HVAC / home ventilation improvements	Net Adjusted Demand Reduction (kW)	-	0.6	3.3	3.9
	HVAC Tune Up	Total Participants	0	0	199	199
Installed kWh/year	HVAC Tune Up	Total Gross Energy Savings (kWh/yr)	0	0	24,076	24,076
	HVAC Tune Up	Net Adjusted Savings (kWh/yr)	0	0	19,261	19,261
Installed Summer peak kW	HVAC Tune Up	Total Gross Demand Reduction (kW)	0.0	0.0	12.6	12.6
	HVAC Tune Up	Net Adjusted Demand Reduction (kW)	0.0	0.0	10.1	10.1
Installed Winter peak kW	HVAC Tune Up	Total Gross Demand Reduction (kW)	-	-	9.4	9.4
	HVAC Tune Up	Net Adjusted Demand Reduction (kW)	-	-	7.5	7.5
	Insulation repair/upgrade floor	Total Participants	0	450	47	497
Installed kWh/year	Insulation repair/upgrade floor	Total Gross Energy Savings (kWh/yr)	0	79,730	19,061	98,791
	Insulation repair/upgrade floor	Net Adjusted Savings (kWh/yr)	0	63,784	15,249	79,033
Installed Summer peak kW	Insulation repair/upgrade floor	Total Gross Demand Reduction (kW)	0.0	18.4	3.6	22.0
	Insulation repair/upgrade floor	Net Adjusted Demand Reduction (kW)	0.0	14.7	2.9	17.6
Installed Winter peak kW	Insulation repair/upgrade floor	Total Gross Demand Reduction (kW)	-	56.9	16.8	73.7
	Insulation repair/upgrade floor	Net Adjusted Demand Reduction (kW)	-	45.5	13.4	59.0



VA - Residential HVAC Health and Safety Program			2020	2021	2022	2020-2022
Measures						
	Combustion appliance safety checks / enhancements	Total Participants	0	3	1	4
Installed kWh/year	Combustion appliance safety checks / enhancements	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Combustion appliance safety checks / enhancements	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Combustion appliance safety checks / enhancements	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Combustion appliance safety checks / enhancements	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Combustion appliance safety checks / enhancements	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Combustion appliance safety checks / enhancements	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Dehumidifiers	Total Participants	0	1	3	4
Installed kWh/year	Dehumidifiers	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Dehumidifiers	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Dehumidifiers	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Dehumidifiers	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Dehumidifiers	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Dehumidifiers	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Duct Sealing	Total Participants	0	354	90	444
Installed kWh/year	Duct Sealing	Total Gross Energy Savings (kWh/yr)	0	191,965	135,621	327,586
	Duct Sealing	Net Adjusted Savings (kWh/yr)	0	153,572	108,497	262,069
Installed Summer peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	0.0	73.3	72.1	145.3
	Duct Sealing	Net Adjusted Demand Reduction (kW)	0.0	58.6	57.7	116.3
Installed Winter peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	-	79.8	36.2	116.0
	Duct Sealing	Net Adjusted Demand Reduction (kW)	-	63.9	28.9	92.8
	Fire and fall safety checks / enhancements	Total Participants	0	522	204	726
Installed kWh/year	Fire and fall safety checks / enhancements	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Fire and fall safety checks / enhancements	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Fire and fall safety checks / enhancements	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Fire and fall safety checks / enhancements	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Fire and fall safety checks / enhancements	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Fire and fall safety checks / enhancements	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0



VA - Residential HVAC Health and Safety Program			2020	2021	2022	2020-2022
Measures						
	Air quality control	Total Participants	0	18	110	128
Installed kWh/year	Air quality control	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Air quality control	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Air quality control	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Air quality control	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Air quality control	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Air quality control	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Air sealing	Total Participants	0	127	119	246
Installed kWh/year	Air sealing	Total Gross Energy Savings (kWh/yr)	0	22,562	27,170	49,732
	Air sealing	Net Adjusted Savings (kWh/yr)	0	18,050	21,736	39,786
Installed Summer peak kW	Air sealing	Total Gross Demand Reduction (kW)	0.0	1.9	3.5	5.3
	Air sealing	Net Adjusted Demand Reduction (kW)	0.0	1.5	2.8	4.3
Installed Winter peak kW	Air sealing	Total Gross Demand Reduction (kW)	-	23.4	27.5	50.9
	Air sealing	Net Adjusted Demand Reduction (kW)	-	18.7	22.0	40.7
	Assessments of indoor air quality	Total Participants	0	109	52	161
Installed kWh/year	Assessments of indoor air quality	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Assessments of indoor air quality	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Assessments of indoor air quality	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Assessments of indoor air quality	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Assessments of indoor air quality	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Assessments of indoor air quality	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Carbon monoxide detectors and sources	Total Participants	0	989	415	1,404
Installed kWh/year	Carbon monoxide detectors and sources	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Carbon monoxide detectors and sources	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Carbon monoxide detectors and sources	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Carbon monoxide detectors and sources	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Carbon monoxide detectors and sources	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Carbon monoxide detectors and sources	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0



**O.15.4 2020–2022 Virginia Residential HVAC Health and Safety Program
Comparison of Savings to Usage by Rate Schedule**

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RHVC	Not available	266.658612	660	40%	Not Available	Not Available
RHVC	Schedule 1	266.742804	660	40%	12,661	2%
RHVC	Schedule DP-R	55.015514	660	8%	12,007	0%
RHVC	Schedule GS-1	91.742514	660	14%	18,532	0%
RHVC	Schedule 1S	1429.261869	660	217%	27,221	5%
RHVC	Schedule 1G	212.540644	660	32%	12,098	2%

**O.15.5 2020–2022 Virginia Residential HVAC Health and Safety Program Benefit
Cost Scores**

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential HVAC Health and Safety	2019	VA	PUR-2019-00201	++	0.53	0.53	0.31
Residential HVAC Health and Safety	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential HVAC Health and Safety	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential HVAC Health and Safety	2022	VA	PUR-2022-00210	2.08	0.24	0.3	0.17
Residential HVAC Health and Safety	2023	VA	EM&V Report	2.34	0.29	0.37	0.18



O.16 Virginia Residential Income and Age Qualifying Home Improvement Program (DSM Phase IX) 2021-2022

O.16.1 2021–2022 Virginia Residential Income and Age Qualifying Home Improvement Program (DSM Phase IX) Annual Indicator Tables

VA - Residential Income and Age Qualifying Energy Efficiency Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$736	\$244,390	\$245,126
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$15,696	\$5,853,130	\$5,868,826
Costs (\$)		Planned	\$0	\$7,426,787	\$7,426,787
Costs (\$)		Variance	\$15,696	-\$1,573,657	-\$1,557,961
		Annual % of Planned	N/A	79%	79%
Participants ¹		Total (Gross)	0	4,782	4,782
		Planned	0	9,724	9,724
		Variance	0	-4,942	-4,942
		Annual % of Planned (Gross)	N/A	49%	49%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	3,096,191	3,096,191
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	3,096,191	3,096,191
		Net-To-Gross Rate Weighted by Measure	N/A	80%	80%
		Net-To-Gross Adjustment (kWh/yr)	0	-619,238	-619,238
		Net Adjusted Savings (kWh/yr)	0	2,476,953	2,476,953
		Planned Net Savings (kWh/yr)	0	513,427	513,427
		Annual % Toward Planned Net Savings	N/A	482.4%	482.4%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	647	647
		Avg. Net Savings Per Participant (kWh/yr)	N/A	518	518
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	689.3	689.3
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	689.3	689.3
		Net-To-Gross Rate Weighted by Measure	N/A	80%	80%
		Net-To-Gross Adjustment (kW)	0.0	-137.9	-137.9
		Net Adjusted Demand Reduction (kW)	0.0	551.5	551.5
		Planned Net Savings (kW)	0.0	132.0	132.0
		Annual % Toward Planned Net Reduction	N/A	417.7%	417.7%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.1	0.1
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.1	0.1
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	1,713.7	1,713.7
		Realization Rate Weighted by Measure	-	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	1,713.7	1,713.7
		Net-To-Gross Rate Weighted by Measure	-	80%	80%
		Net-To-Gross Adjustment (kW)	-	-342.7	-342.7
		Net Adjusted Demand Reduction (kW)	-	1,371.0	1,371.0
		Planned Net Savings (kW)	0.0	293.6	293.6
		Annual % Toward Planned Net Reduction	-	467.0%	467.0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.4	0.4
		Avg. Net Demand Reduction Per Participant (kW)	-	0.3	0.3
Measures					
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$51	\$51
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.08	\$0.08
		Cum. \$Admin. per kW (Gross)	N/A	\$356	\$356
		Cum. \$EM&V per \$Total	68.2%	2.0%	2.0%
		Cum. \$Rebate per Participant (Gross)	N/A	\$917	\$917



O.16.2 2022 Virginia Residential Income and Age Qualifying Home Improvement Program (DSM Phase IX) Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2021-2022 Total		
VA - Residential Income and Age Qualifying Energy Efficiency Program	Measure	Direct Rebate	\$64	\$514	\$420	\$165	\$44,279	\$56,920	\$15,559	\$16,733	\$15,034	\$20,498	\$35,921	\$39,264	\$244,390	\$245,126		
		O&M (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		Direct Implementation	\$2,001	\$12,319	\$10,059	\$3,942	\$1,060,486	\$1,339,277	\$372,631	\$400,762	\$360,058	\$490,923	\$660,205	\$940,368	\$940,368	\$5,853,130	\$5,868,626	
		O&M (\$)	\$644,677	\$644,677	\$644,677	\$644,677	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$7,426,787	\$7,426,787
		Costs (\$)	-\$642,676	-\$632,358	-\$634,619	-\$640,735	-\$454,477	-\$233,379	-\$205,248	-\$245,952	-\$115,067	-\$254,295	-\$334,356	-\$1,573,697	-\$1,573,697	-\$1,573,697	-\$1,573,697	-\$1,573,697
		Capital (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		Costs (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		Planned	0.0%	0.2%	0.3%	0.4%	0.4%	0.4%	14.7%	32.7%	37.7%	43.1%	45.0%	54.6%	66.1%	78.8%	79%	
		Variance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
		Annual % of Planned	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Participants*	Total	Total (Gross)	0	0	0	0	461	1,172	166	273	314	420	350	1,626	4,762	3,096,191		
		Planned	814	810	810	810	810	810	810	810	810	810	810	810	810	9,724		
		Variance	-814	-810	-810	-810	-349	-362	-644	-537	-496	-390	-460	-460	-460	-4,942		
		Annual % of Planned (Gross)	0%	0%	0%	0%	5%	17%	21%	25%	29%	32%	49%	49%	49%	49%		
		Total Gross Energy Savings (kWh/yr)	0	0	0	0	526,080	874,707	152,344	212,629	220,884	221,355	462,089	425,202	3,096,191	3,096,191		
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	526,080	874,707	152,344	212,629	220,884	221,355	462,089	425,202	3,096,191	3,096,191		
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	526,080	874,707	152,344	212,629	220,884	221,355	462,089	425,202	3,096,191	3,096,191		
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%		
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	-105,216	-174,941	-30,469	-42,526	-44,177	-44,271	-92,598	-85,040	-619,238	-619,238		
Installed Summer peak kW	Total	Planned Net Savings (kWh/yr)	0	0	0	0	420,864	699,766	121,875	170,103	176,707	177,064	370,391	340,162	2,476,953	2,476,953		
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	82.0%	218.3%	242.0%	276.1%	309.6%	344.0%	416.2%	482.4%	482.4%			
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	1,441	746	918	778	703	527	1,323	262			
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	913	597	734	623	563	422	1,058	209	518			
		Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	123.6	188.8	34.4	43.3	56.6	69.1	110.0	63.5	689.3			
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	123.6	188.8	34.4	43.3	56.6	69.1	110.0	63.5	689.3			
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	-24.7	-37.8	-6.9	-8.7	-11.3	-13.8	-22.0	-12.7	-137.9			
Installed Winter peak kW	Total	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	98.9	151.0	27.5	34.7	45.3	55.3	88.0	50.8	581.5			
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	74.9%	189.3%	210.1%	236.4%	270.7%	312.6%	379.2%	417.7%				
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	0.27	0.16	0.21	0.16	0.18	0.16	0.31	0.04				
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	0.2	0.1	0.2	0.1	0.1	0.1	0.3	0.03				
		Total Gross Demand Reduction (kW)	-	-	-	-	318.9	530.1	106.8	119.6	108.3	88.7	300.8	140.6	1,713.7			
		Realization Rate Weighted by Measure	-	-	-	-	100%	100%	100%	100%	100%	100%	100%	100%				
		Realization Rate Adjustment (kW)	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	318.9	530.1	106.8	119.6	108.3	88.7	300.8	140.6	1,713.7			
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	80%	80%	80%	80%	80%	80%	80%	80%				
		Net-To-Gross Adjustment (kW)	-	-	-	-	-63.8	-106.0	-21.4	-23.9	-21.7	-17.7	-60.2	-28.1	-342.7			
Measures	Program Performance	Planned Net Savings (kW)	24.6	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	293.6		
		Annual % Toward Planned Net Reduction	-	-	-	-	86.9%	231.3%	260.4%	293.0%	322.6%	346.7%	428.7%	467.0%				
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	0.7	0.5	0.6	0.4	0.3	0.2	0.9	0.09				
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	0.6	0.4	0.5	0.4	0.3	0.2	0.7	0.07				
		Total Gross Demand Reduction (kW)	-	-	-	-	318.9	530.1	106.8	119.6	108.3	88.7	300.8	140.6	1,713.7			
		Realization Rate Weighted by Measure	-	-	-	-	100%	100%	100%	100%	100%	100%	100%	100%				
		Realization Rate Adjustment (kW)	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	318.9	530.1	106.8	119.6	108.3	88.7	300.8	140.6	1,713.7			
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	80%	80%	80%	80%	80%	80%	80%	80%				
		Net-To-Gross Adjustment (kW)	-	-	-	-	-63.8	-106.0	-21.4	-23.9	-21.7	-17.7	-60.2	-28.1	-342.7			
Program Performance	Cum. \$Admin. per Participant (Gross)	Cum. \$Admin. per kWh/yr (Gross)	N/A	N/A	N/A	N/A	\$100	\$63	\$65	\$65	\$63	\$61	\$65	\$51	\$51			
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	\$0.09	\$0.07	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08				
		Cum. \$EM&M per \$1 total	60.5%	69.7%	72.5%	73.8%	3.74	\$327	\$339	\$345	\$335	\$329	\$329	\$356				
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	\$1,597	\$1,104	\$1,166	\$1,138	\$1,097	\$1,063	\$1,153	\$917				
		Cum. \$Total	N/A	N/A	N/A	N/A	\$1,597	\$1,104	\$1,166	\$1,138	\$1,097	\$1,063	\$1,153	\$917				



O.16.3 2020–2022 Virginia Residential Income and Age Qualifying Home Improvement Program (DSM Phase IX) Measure Indicator Tables

VA - Residential Income and Age Qualifying Home Improvement Program			2020	2021	2022	2015-2022
Measures						
	Kitchen Aerator	Total Participants	76	164	0	8,892
Installed kWh/year	Kitchen Aerator	Total Gross Energy Savings (kWh/yr)	4,540	10,890	0	258,739
	Kitchen Aerator	Net Adjusted Savings (kWh/yr)	4,767	8,712	0	268,953
Installed Summer peak kW	Kitchen Aerator	Total Gross Demand Reduction (kW)	0.2	0.4	0.0	22.1
	Kitchen Aerator	Net Adjusted Demand Reduction (kW)	0.2	0.3	0.0	23.1
Installed Winter peak kW	Kitchen Aerator	Total Gross Demand Reduction (kW)	-	0.4	-	0.4
	Kitchen Aerator	Net Adjusted Demand Reduction (kW)	-	0.3	-	0.3
	Pipe Insulation	Total Participants	44	130	0	7,253
Installed kWh/year	Pipe Insulation	Total Gross Energy Savings (kWh/yr)	2,447	8,827	0	612,101
	Pipe Insulation	Net Adjusted Savings (kWh/yr)	2,570	7,061	0	640,500
Installed Summer peak kW	Pipe Insulation	Total Gross Demand Reduction (kW)	0.3	1.0	0.0	69.9
	Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.3	0.8	0.0	73.1
Installed Winter peak kW	Pipe Insulation	Total Gross Demand Reduction (kW)	-	1.0	-	1.0
	Pipe Insulation	Net Adjusted Demand Reduction (kW)	-	0.8	-	0.8
	Showerhead	Total Participants	125	255	0	9,363
Installed kWh/year	Showerhead	Total Gross Energy Savings (kWh/yr)	24,453	57,967	0	1,883,922
	Showerhead	Net Adjusted Savings (kWh/yr)	25,675	46,374	0	1,963,626
Installed Summer peak kW	Showerhead	Total Gross Demand Reduction (kW)	1.4	3.1	0.0	137.7
	Showerhead	Net Adjusted Demand Reduction (kW)	1.5	2.5	0.0	143.8
Installed Winter peak kW	Showerhead	Total Gross Demand Reduction (kW)	-	3.1	-	3.1
	Showerhead	Net Adjusted Demand Reduction (kW)	-	2.5	-	2.5

VA - Residential Income and Age Qualifying Home Improvement Program			2020	2021	2022	2015-2022
Measures						
	40W LED	Total Participants	266	636	0	7,992
Installed kWh/year	40W LED	Total Gross Energy Savings (kWh/yr)	20,056	65,193	0	850,984
	40W LED	Net Adjusted Savings (kWh/yr)	21,059	52,155	0	877,235
Installed Summer peak kW	40W LED	Total Gross Demand Reduction (kW)	1.8	6.0	0.0	85.6
	40W LED	Net Adjusted Demand Reduction (kW)	1.9	4.8	0.0	88.4
Installed Winter peak kW	40W LED	Total Gross Demand Reduction (kW)	-	12.8	-	12.8
	40W LED	Net Adjusted Demand Reduction (kW)	-	10.2	-	10.2
	60W LED	Total Participants	230	1,086	0	19,365
Installed kWh/year	60W LED	Total Gross Energy Savings (kWh/yr)	20,540	173,820	0	3,505,532
	60W LED	Net Adjusted Savings (kWh/yr)	21,567	139,056	0	3,637,354
Installed Summer peak kW	60W LED	Total Gross Demand Reduction (kW)	1.9	15.9	0.0	372.9
	60W LED	Net Adjusted Demand Reduction (kW)	2.0	12.7	0.0	387.6
Installed Winter peak kW	60W LED	Total Gross Demand Reduction (kW)	-	34.0	-	34.0
	60W LED	Net Adjusted Demand Reduction (kW)	-	27.2	-	27.2
	Attic Insulation	Total Participants	861	705	0	11,490
Installed kWh/year	Attic Insulation	Total Gross Energy Savings (kWh/yr)	147,782	132,651	0	2,190,548
	Attic Insulation	Net Adjusted Savings (kWh/yr)	155,172	106,121	0	2,266,913
Installed Summer peak kW	Attic Insulation	Total Gross Demand Reduction (kW)	52.4	30.4	0.0	366.5
	Attic Insulation	Net Adjusted Demand Reduction (kW)	55.0	24.4	0.0	377.2
Installed Winter peak kW	Attic Insulation	Total Gross Demand Reduction (kW)	-	103.1	-	103.1
	Attic Insulation	Net Adjusted Demand Reduction (kW)	-	82.5	-	82.5
	Bathroom Aerator	Total Participants	96	262	0	9,559
Installed kWh/year	Bathroom Aerator	Total Gross Energy Savings (kWh/yr)	3,503	9,815	0	285,880
	Bathroom Aerator	Net Adjusted Savings (kWh/yr)	3,678	7,852	0	297,720
Installed Summer peak kW	Bathroom Aerator	Total Gross Demand Reduction (kW)	0.3	1.1	0.0	33.2
	Bathroom Aerator	Net Adjusted Demand Reduction (kW)	0.3	0.9	0.0	34.6
Installed Winter peak kW	Bathroom Aerator	Total Gross Demand Reduction (kW)	-	1.1	-	1.1
	Bathroom Aerator	Net Adjusted Demand Reduction (kW)	-	0.9	-	0.9



O.16.4 2020–2022 Virginia Residential Income and Age Qualifying Home Improvement Program (DSM Phase IX) Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
EAL4	Not available	517.974234	367	141%	Not Available	Not Available
EAL4	Schedule DP-R	503.680156	367	137%	12,007	4%
EAL4	Schedule 1	517.194553	367	141%	12,661	4%
EAL4	Schedule 1S	1057.663249	367	288%	27,221	4%
EAL4	Schedule GS-1	278.598706	367	76%	18,532	2%
EAL4	Schedule 1G	1028.767438	367	280%	12,098	9%

O.16.5 2020–2022 Virginia Residential Income and Age Qualifying Home Improvement Program (DSM Phase IX) Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Income and Age Qualifying Energy Efficiency	2020	VA	PUR-2020-00274	++	0.09	0.09	0.09
Residential Income and Age Qualifying Energy Efficiency	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Income and Age Qualifying Energy Efficiency	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Residential Income and Age Qualifying Energy Efficiency	2023	VA	EM&V Report	++	0.73	0.73	0.27



O.17 Virginia Residential and Non-Residential Solar (HB 2789) Program 2021-2022

O.17.1 2021-2022 Virginia Residential and Non-Residential Solar (HB 2789) Program Annual Indicator Tables

VA - Income and Age Qualifying Solar Program Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$514	\$8,190	\$8,704
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$10,963	\$196,159	\$207,123
Costs (\$)		Planned	\$0	\$10,522,665	\$10,522,665
Costs (\$)		Variance	\$10,963	-\$10,326,506	-\$10,315,543
		Annual % of Planned	N/A	2%	2%
Participants ¹		Total (Gross)	0	7	7
		Planned	0	555	555
		Variance	0	-548	-548
		Annual % of Planned (Gross)	N/A	1%	1%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	34,559	34,559
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	34,559	34,559
		Net-To-Gross Rate Weighted by Measure	N/A	80%	80%
		Net-To-Gross Adjustment (kWh/yr)	0	-6,912	-6,912
		Net Adjusted Savings (kWh/yr)	0	27,647	27,647
		Planned Net Savings (kWh/yr)	0	2,037,960	2,037,960
		Annual % Toward Planned Net Savings	N/A	1.36%	1.36%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	4,937	4,937
		Avg. Net Savings Per Participant (kWh/yr)	N/A	3,950	3,950
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	12.4	12.4
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	12.4	12.4
		Net-To-Gross Rate Weighted by Measure	N/A	80%	80%
		Net-To-Gross Adjustment (kW)	0.0	-2.5	-2.5
		Net Adjusted Demand Reduction (kW)	0.0	10.0	10.0
		Planned Net Savings (kW)	0.0	976.3	976.3
		Annual % Toward Planned Net Reduction	N/A	1.02%	1.02%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	1.8	1.8
		Avg. Net Demand Reduction Per Participant (kW)	N/A	1.4	1.4
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	0.0	0.0
		Realization Rate Weighted by Measure	-	-	N/A
		Realization Rate Adjustment (kW)	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	0.0	0.0
		Planned Net Savings (kW)	-	2.2	2.2
		Annual % Toward Planned Net Reduction	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$1,243	\$1,243
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	\$699	\$699
		Cum. \$EM&V per \$Total	25.7%	9.5%	9.5%
		Cum. \$Rebate per Participant (Gross)	N/A	\$18,194	\$18,194



O.17.2 2022 Virginia Residential and Non-Residential Solar (HB 2789) Program Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2021-2022 Total	
VA - Income and Age Qualifying Solar Program	Direct Rebate																
	O&M (\$)		\$71	\$220	\$213	\$58	\$223	\$116	\$173	\$367	\$178	\$232	\$53,318	\$919	\$8,190	\$8,704	
	O&M (\$)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	O&M (\$)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Capital (\$)																
	Costs (\$)		\$1,709	\$5,277	\$7,502	\$1,387	\$5,348	\$2,778	\$4,151	\$8,789	\$8,789	\$4,266	\$5,566	\$127,372	\$22,013	\$196,159	\$207,123
	Costs (\$)		\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889
	Costs (\$)		\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889
	Costs (\$)		\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889
	Costs (\$)		\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889	\$876,889
Participants ¹	Annual % of Planned		0.0%	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.4%	0.4%	0.4%	1.7%	1.9%	2%	2%	
	Total (Gross)		0	0	0	0	0	0	0	0	0	0	0	6	1	7	
	Planned		49	46	46	46	46	46	46	46	46	46	46	46	46	555	
	Variance		-49	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-548	
	Annual % of Planned (Gross)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	
	Total Gross Energy Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	34,559	
	Realization Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	
	Realization Rate Adjusted		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	34,559	
	Net-T o-Gross Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80%	
Net-T o-Gross Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	-6,912		
Net Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	27,647		
Planned Net Savings (kWh/yr)		179,928	168,912	168,912	168,912	168,912	168,912	168,912	168,912	168,912	168,912	168,912	168,912	168,912	2,037,960		
Annual % Toward Planned Net Savings		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1.13%	1.36%	1.36%		
Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4,937		
Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,950		
Installed Summer peak kW	Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4		
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	
	Net-T o-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	80%	
	Net-T o-Gross Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.5	
	Net Adjusted Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	
	Planned Net Savings (kW)		86.2	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	976.3	
	Annual % Toward Planned Net Reduction		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.85%	1.02%	1.02%	
	Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.8	
Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.4		
Installed Winter peak kW	Total		-	-	-	-	-	-	-	-	-	-	-	-	0.0		
	Realization Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	
	Realization Rate Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	
	Net-T o-Gross Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	
	Net-T o-Gross Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	
	Net Adjusted Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	
	Planned Net Savings (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	
	Annual % Toward Planned Net Reduction		-	-	-	-	-	-	-	-	-	-	-	-	-	0%	
	Avg. Gross Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Avg. Net Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Program Performance	Cum. \$Admin. per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,243	\$1,243	
	Cum. \$Admin. per kWh/year (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$0	\$0	
	Cum. \$Admin. per kW (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$699	\$699	
	Cum. \$REB&V per \$1 total		22.3%	34.5%	41.7%	40.0%	33.0%	30.7%	27.4%	30.2%	30.3%	30.3%	30.3%	30.3%	9.5%	9.5%	
	Cum. \$REB&V per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$18,194	\$18,194	



O.17.3 2021-2022 Virginia Residential and Non-Residential Solar (HS 2789)
Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
EALS	Not available	3949.6	3,672	108%	Not Available	Not Available
EALS	Schedule 1	4070.8	3,672	111%	12,661	32%
EALS	Schedule 1G	3222.4	3,672	88%	12,098	27%

O.17.4 2021-2022 Virginia Residential and Non-Residential Solar (HS 2789)
Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Income and Age Qualifying Solar Program	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Income and Age Qualifying Solar Program	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Income and Age Qualifying Solar Program	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Income and Age Qualifying Solar Program	2023	VA	EM&V Report	++	0.2	0.2	0.13



O.18 Virginia Non-Residential Prescriptive Program (Phase VI) 2017–2022

O.18.1 2017–2022 Virginia Non-Residential Prescriptive Program (Phase VI) Annual Indicator Tables

VA - Non-Residential Prescriptive Program			2017	2018	2019	2020	2021	2022	2017-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate							
O&M (\$)		Direct Implementation							
O&M (\$)		Direct EM&V							
O&M (\$)		Indirect Other (Administrative)	\$28,898	\$381,096	\$281,598	\$579,427	\$398,097	\$8,943	\$1,678,059
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$734,410	\$6,748,855	\$5,887,581	\$11,128,206	\$8,490,163	\$214,195	\$33,203,410
Costs (\$)		Planned	\$3,735,349	\$6,246,114	\$6,354,082	\$6,282,076	\$6,176,552	\$49,351	\$28,843,524
Costs (\$)		Variance	-\$3,000,939	\$502,740	-\$466,501	\$4,846,131	\$2,313,611	\$164,844	\$4,359,886
		Annual % of Planned	20%	108%	93%	177%	137%	434%	115%
Participants ¹		Total (Gross)	4	865	666	577	709	14	2,835
		Planned	266	427	427	427	437	0	1,984
		Variance	-262	438	239	150	272	14	851
		Annual % of Planned (Gross)	2%	203%	156%	135%	162%	N/A	143%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	699	7,023,169	4,403,947	45,108,795	25,303,910	332,103	82,172,624
		Realization Rate Weighted by Measure	100%	100%	100%	48%	61%	57%	59%
		Realization Rate Adjustment (kWh/yr)	0	0	0	-23,380,737	-9,907,233	-143,337	-33,431,307
		Realization Rate Adjusted Savings (kWh/yr)	699	7,023,169	4,403,947	21,728,058	15,396,678	188,766	48,741,317
		Net-To-Gross Rate Weighted by Measure	85%	85%	85%	90%	87%	87%	88%
		Net-To-Gross Adjustment (kWh/yr)	-105	-1,053,475	-660,592	-2,649,527	-2,586,225	-30,538	-6,980,463
		Net Adjusted Savings (kWh/yr)	594	5,969,694	3,743,355	19,078,531	12,810,453	158,228	41,760,854
		Planned Net Savings (kWh/yr)	5,959,948	26,839,364	1,672,489	4,662,193	47,911,107	0	87,045,100
		Annual % Toward Planned Net Savings	0.01%	22.2%	223.8%	409.2%	26.7%	N/A	48.0%
		Avg. Gross Savings Per Participant (kWh/yr)	175	8,119	6,613	78,178	35,690	23,722	28,985
		Avg. Net Savings Per Participant (kWh/yr)	149	6,901	5,621	33,065	18,068	11,302	14,730
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.1	3,366.4	3,385.2	5,921.1	4,217.8	49.0	16,939.6
		Realization Rate Weighted by Measure	100%	100%	100%	79%	85%	85%	89%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	-1,272.2	-629.0	-7.4	-1,908.6
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.1	3,366.4	3,385.2	4,648.9	3,588.8	41.6	15,031.0
		Net-To-Gross Rate Weighted by Measure	85%	85%	85%	83%	81%	81%	83%
		Net-To-Gross Adjustment (kW)	0.0	-505.0	-507.8	-980.7	-821.5	-9.1	-2,824.0
		Net Adjusted Demand Reduction (kW)	0.1	2,861.4	2,877.4	3,807.5	2,843.9	33.3	12,423.5
		Planned Net Savings (kW)	0.0	4,296.0	684.7	1,858.4	7,165.3	0.0	14,004.3
		Annual % Toward Planned Net Reduction	N/A	66.6%	420.3%	204.9%	39.7%	N/A	88.7%
		Avg. Gross Demand Reduction Per Participant (kW)	0.02	3.9	5.1	10.3	5.9	3.5	6.0
		Avg. Net Demand Reduction Per Participant (kW)	0.02	3.3	4.3	6.6	4.0	2.4	4.4
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	2,977.5	21.8	2,999.3
		Realization Rate Weighted by Measure	-	-	-	-	74%	67%	74%
		Realization Rate Adjustment (kW)	-	-	-	-	-762.2	-7.3	-769.4
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	2,215.3	14.6	2,229.9
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	82%	88%	82%
		Net-To-Gross Adjustment (kW)	-	-	-	-	-531.3	-2.5	-533.8
		Net Adjusted Demand Reduction (kW)	-	-	-	-	1,794.1	12.7	1,806.8
		Planned Net Savings (kW)	-	-	-	-	0.0	0.0	0.0
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	N/A
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	4.2	1.6	4.1
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	2.5	0.9	2.5
Program Performance		Cum. \$Admin. per Participant (Gross)	\$7,225	\$472	\$451	\$602	\$592	\$592	\$592
		Cum. \$Admin. per kWh/year (Gross)	\$41	\$0.06	\$0.06	\$0.02	\$0.02	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	\$351,557	\$122	\$102	\$100	\$99	\$99	\$99
		Cum. \$EM&V per \$Total	10.9%	2.9%	2.4%	1.9%	2.9%	3.3%	3.3%
		Cum. \$Rebate per Participant (Gross)	\$157	\$5,291	\$5,641	\$8,340	\$8,480	\$8,465	\$8,465



O.18.3 2017–2022 Non-Residential Virginia Prescriptive Program (Phase VI)
Measure Indicator Tables

VA - Non-Residential Prescriptive Program			2017	2018	2019	2020	2021	2022	2017-2022
Measures									
	Strip Curtain	Total Participants	0	291	41	0	6	0	338
Installed kWh/year	Strip Curtain	Total Gross Energy Savings (kWh/yr)	0	827,594	27,451	0	33,753	0	888,798
	Strip Curtain	Net Adjusted Savings (kWh/yr)	0	703,455	23,333	0	36,696	0	763,485
Installed Summer peak kW	Strip Curtain	Total Gross Demand Reduction (kW)	0.0	94.5	3.1	0.0	3.9	0.0	101.5
	Strip Curtain	Net Adjusted Demand Reduction (kW)	0.0	80.3	2.7	0.0	4.2	0.0	87.2
Installed Winter peak kW	Strip Curtain	Total Gross Demand Reduction (kW)	-	-	-	-	3.9	-	3.9
	Strip Curtain	Net Adjusted Demand Reduction (kW)	-	-	-	-	4.2	-	4.2
	VSDs at Kitchen Exhaust Fan	Total Participants	0	0	0	3	0	0	3
Installed kWh/year	VSDs at Kitchen Exhaust Fan	Total Gross Energy Savings (kWh/yr)	0	0	0	100,013	0	0	100,013
	VSDs at Kitchen Exhaust Fan	Net Adjusted Savings (kWh/yr)	0	0	0	186,024	0	0	186,024
Installed Summer peak kW	VSDs at Kitchen Exhaust Fan	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	22.2	0.0	0.0	22.2
	VSDs at Kitchen Exhaust Fan	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	20.6	0.0	0.0	20.6
Installed Winter peak kW	VSDs at Kitchen Exhaust Fan	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	0.0
	VSDs at Kitchen Exhaust Fan	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	0.0

VA - Non-Residential Prescriptive Program			2017	2018	2019	2020	2021	2022	2017-2022
Measures									
	Ice Maker	Total Participants	0	0	8	8	0	0	16
Installed kWh/year	Ice Maker	Total Gross Energy Savings (kWh/yr)	0	0	13,746	23,064	0	0	36,810
	Ice Maker	Net Adjusted Savings (kWh/yr)	0	0	11,684	11,763	0	0	23,447
Installed Summer peak kW	Ice Maker	Total Gross Demand Reduction (kW)	0.0	0.0	1.6	2.6	0.0	0.0	4.2
	Ice Maker	Net Adjusted Demand Reduction (kW)	0.0	0.0	1.3	1.3	0.0	0.0	2.7
Installed Winter peak kW	Ice Maker	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	0.0
	Ice Maker	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	0.0
	Low/No Sweat Door Film	Total Participants	0	0	1	4	3	0	8
Installed kWh/year	Low/No Sweat Door Film	Total Gross Energy Savings (kWh/yr)	0	0	731	226,459	188,626	0	415,817
	Low/No Sweat Door Film	Net Adjusted Savings (kWh/yr)	0	0	621	212,872	177,309	0	390,802
Installed Summer peak kW	Low/No Sweat Door Film	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	5.4	4.5	0.0	10.0
	Low/No Sweat Door Film	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	5.1	4.3	0.0	9.4
Installed Winter peak kW	Low/No Sweat Door Film	Total Gross Demand Reduction (kW)	-	-	-	-	0.0	-	0.0
	Low/No Sweat Door Film	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0	-	0.0
	Night Cover	Total Participants	0	14	3	0	1	0	18
Installed kWh/year	Night Cover	Total Gross Energy Savings (kWh/yr)	0	131,356	22,050	0	5,670	0	159,076
	Night Cover	Net Adjusted Savings (kWh/yr)	0	111,652	18,743	0	4,820	0	135,214
Installed Summer peak kW	Night Cover	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Night Cover	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Night Cover	Total Gross Demand Reduction (kW)	-	-	-	-	0.0	-	0.0
	Night Cover	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0	-	0.0
	Steam Cooker	Total Participants	0	0	1	1	0	0	2
Installed kWh/year	Steam Cooker	Total Gross Energy Savings (kWh/yr)	0	0	9,344	10,404	0	0	19,748
	Steam Cooker	Net Adjusted Savings (kWh/yr)	0	0	7,942	8,844	0	0	16,786
Installed Summer peak kW	Steam Cooker	Total Gross Demand Reduction (kW)	0.0	0.0	3.1	3.6	0.0	0.0	6.7
	Steam Cooker	Net Adjusted Demand Reduction (kW)	0.0	0.0	2.6	3.0	0.0	0.0	5.7
Installed Winter peak kW	Steam Cooker	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	0.0
	Steam Cooker	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	0.0



VA - Non-Residential Prescriptive Program			2017	2018	2019	2020	2021	2022	2017-2022
Measures									
Installed kWh/year	Evaporator Fan Control (Cooler and Freezer)	Total Participants	0	0	1	0	0	0	1
	Evaporator Fan Control (Cooler and Freezer)	Total Gross Energy Savings (kWh/yr)	0	0	27,937	0	0	0	27,937
	Evaporator Fan Control (Cooler and Freezer)	Net Adjusted Savings (kWh/yr)	0	0	23,746	0	0	0	23,746
Installed Summer peak kW	Evaporator Fan Control (Cooler and Freezer)	Total Gross Demand Reduction (kW)	0.0	0.0	2.9	0.0	0.0	0.0	2.9
	Evaporator Fan Control (Cooler and Freezer)	Net Adjusted Demand Reduction (kW)	0.0	0.0	2.5	0.0	0.0	0.0	2.5
Installed Winter peak kW	Evaporator Fan Control (Cooler and Freezer)	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	0.0
	Evaporator Fan Control (Cooler and Freezer)	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	0.0
	Freezer and Refrigerator	Total Participants	0	0	37	13	3	0	53
Installed kWh/year	Freezer and Refrigerator	Total Gross Energy Savings (kWh/yr)	0	0	39,611	7,258	6,258	0	53,126
	Freezer and Refrigerator	Net Adjusted Savings (kWh/yr)	0	0	33,669	5,725	4,936	0	44,330
Installed Summer peak kW	Freezer and Refrigerator	Total Gross Demand Reduction (kW)	0.0	0.0	5.2	1.0	0.8	0.0	7.0
	Freezer and Refrigerator	Net Adjusted Demand Reduction (kW)	0.0	0.0	4.4	0.8	0.6	0.0	5.8
Installed Winter peak kW	Freezer and Refrigerator	Total Gross Demand Reduction (kW)	-	-	-	-	0.8	-	0.8
	Freezer and Refrigerator	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.6	-	0.6
	Griddle	Total Participants	0	0	0	1	0	0	1
Installed kWh/year	Griddle	Total Gross Energy Savings (kWh/yr)	0	0	0	4,136	0	0	4,136
	Griddle	Net Adjusted Savings (kWh/yr)	0	0	0	3,515	0	0	3,515
Installed Summer peak kW	Griddle	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.6	0.0	0.0	0.6
	Griddle	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.5	0.0	0.0	0.5
Installed Winter peak kW	Griddle	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	0.0
	Griddle	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	0.0
	Hot Food Holder	Total Participants	0	0	16	2	0	0	18
Installed kWh/year	Hot Food Holder	Total Gross Energy Savings (kWh/yr)	0	0	40,986	819	0	0	41,806
	Hot Food Holder	Net Adjusted Savings (kWh/yr)	0	0	34,838	402	0	0	35,240
Installed Summer peak kW	Hot Food Holder	Total Gross Demand Reduction (kW)	0.0	0.0	11.3	0.2	0.0	0.0	11.4
	Hot Food Holder	Net Adjusted Demand Reduction (kW)	0.0	0.0	9.6	0.1	0.0	0.0	9.7
Installed Winter peak kW	Hot Food Holder	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	0.0
	Hot Food Holder	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	0.0

VA - Non-Residential Prescriptive Program			2017	2018	2019	2020	2021	2022	2017-2022
Measures									
Installed kWh/year	Door Gasket	Total Participants	4	657	232	132	487	10	1,522
	Door Gasket	Total Gross Energy Savings (kWh/yr)	655	3,298,531	956,604	180,571	690,708	13,150	5,140,220
	Door Gasket	Net Adjusted Savings (kWh/yr)	557	2,803,752	813,113	131,384	502,559	9,568	4,260,933
Installed Summer peak kW	Door Gasket	Total Gross Demand Reduction (kW)	0.1	377.1	108.8	20.7	79.0	1.5	587.1
	Door Gasket	Net Adjusted Demand Reduction (kW)	0.1	320.5	92.5	15.0	57.5	1.1	486.7
Installed Winter peak kW	Door Gasket	Total Gross Demand Reduction (kW)	-	-	-	-	79.0	1.5	80.5
	Door Gasket	Net Adjusted Demand Reduction (kW)	-	-	-	-	57.5	1.1	58.6
	Duct Test and Seal	Total Participants	0	200	271	352	58	2	883
Installed kWh/year	Duct Test and Seal	Total Gross Energy Savings (kWh/yr)	0	2,022,779	1,525,020	885,776	788,624	4,483	5,226,683
	Duct Test and Seal	Net Adjusted Savings (kWh/yr)	0	1,719,362	1,296,267	531,466	473,174	2,690	4,022,960
Installed Summer peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	0.0	892.2	724.0	590.6	494.6	0.4	2,701.7
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	0.0	758.3	615.4	341.1	285.6	0.2	2,000.7
Installed Winter peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	-	-	-	-	1,155.9	1.0	1,156.9
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	-	-	-	-	667.5	0.6	668.1
	ECM at Evaporator Fan	Total Participants	0	0	8	17	22	0	47
Installed kWh/year	ECM at Evaporator Fan	Total Gross Energy Savings (kWh/yr)	0	0	37,703	96,581	114,282	0	248,566
	ECM at Evaporator Fan	Net Adjusted Savings (kWh/yr)	0	0	32,047	94,649	111,996	0	238,693
Installed Summer peak kW	ECM at Evaporator Fan	Total Gross Demand Reduction (kW)	0.0	0.0	4.3	11.0	18.4	0.0	33.8
	ECM at Evaporator Fan	Net Adjusted Demand Reduction (kW)	0.0	0.0	3.7	10.8	18.1	0.0	32.5
Installed Winter peak kW	ECM at Evaporator Fan	Total Gross Demand Reduction (kW)	-	-	-	-	18.4	-	18.4
	ECM at Evaporator Fan	Net Adjusted Demand Reduction (kW)	-	-	-	-	18.1	-	18.1
	Electric Fryer	Total Participants	0	0	14	6	0	0	20
Installed kWh/year	Electric Fryer	Total Gross Energy Savings (kWh/yr)	0	0	23,290	16,003	0	0	39,294
	Electric Fryer	Net Adjusted Savings (kWh/yr)	0	0	19,797	13,603	0	0	33,400
Installed Summer peak kW	Electric Fryer	Total Gross Demand Reduction (kW)	0.0	0.0	4.3	2.7	0.0	0.0	7.0
	Electric Fryer	Net Adjusted Demand Reduction (kW)	0.0	0.0	3.7	2.3	0.0	0.0	6.0
Installed Winter peak kW	Electric Fryer	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	0.0
	Electric Fryer	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	0.0



VA - Non-Residential Prescriptive Program			2017	2018	2019	2020	2021	2022	2017-2022
Measures									
	AC Tune-Ups	Total Participants	0	120	421	715	345	6	1,607
Installed kWh/year	AC Tune-Ups	Total Gross Energy Savings (kWh/yr)	0	698,864	1,594,599	3,151,386	5,307,219	55,496	10,807,564
	AC Tune-Ups	Net Adjusted Savings (kWh/yr)	0	594,034	1,355,410	2,802,212	4,719,180	49,347	9,520,182
Installed Summer peak kW	AC Tune-Ups	Total Gross Demand Reduction (kW)	0.0	1,997.7	2,509.8	2,331.3	2,300.6	28.4	9,167.8
	AC Tune-Ups	Net Adjusted Demand Reduction (kW)	0.0	1,698.0	2,133.3	1,754.1	1,731.0	21.3	7,337.8
Installed Winter peak kW	AC Tune-Ups	Total Gross Demand Reduction (kW)	-	-	-	-	403.6	0.6	404.1
	AC Tune-Ups	Net Adjusted Demand Reduction (kW)	-	-	-	-	303.6	0.4	304.1
	Condenser Coil Clean	Total Participants	0	0	12	400	114	2	528
Installed kWh/year	Condenser Coil Clean	Total Gross Energy Savings (kWh/yr)	0	0	79,204	40,405,247	18,166,538	258,975	58,909,963
	Condenser Coil Clean	Net Adjusted Savings (kWh/yr)	0	0	67,323	15,075,198	6,777,935	96,623	22,017,080
Installed Summer peak kW	Condenser Coil Clean	Total Gross Demand Reduction (kW)	0.0	0.0	5.8	2,929.1	1,315.5	18.8	4,269.1
	Condenser Coil Clean	Net Adjusted Demand Reduction (kW)	0.0	0.0	4.9	1,652.6	742.2	10.6	2,410.3
Installed Winter peak kW	Condenser Coil Clean	Total Gross Demand Reduction (kW)	-	-	-	-	1,315.5	18.8	1,334.3
	Condenser Coil Clean	Net Adjusted Demand Reduction (kW)	-	-	-	-	742.2	10.6	752.8
	Convection Oven	Total Participants	0	0	2	1	1	0	4
Installed kWh/year	Convection Oven	Total Gross Energy Savings (kWh/yr)	0	0	488	771	1,845	0	3,104
	Convection Oven	Net Adjusted Savings (kWh/yr)	0	0	415	655	1,568	0	2,638
Installed Summer peak kW	Convection Oven	Total Gross Demand Reduction (kW)	0.0	0.0	0.5	0.1	0.4	0.0	1.0
	Convection Oven	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.4	0.1	0.4	0.0	0.9
Installed Winter peak kW	Convection Oven	Total Gross Demand Reduction (kW)	-	-	-	-	0.4	-	0.4
	Convection Oven	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.4	-	0.4
	Door Closer	Total Participants	1	287	47	3	6	0	344
Installed kWh/year	Door Closer	Total Gross Energy Savings (kWh/yr)	44	44,045	5,182	305	388	0	49,964
	Door Closer	Net Adjusted Savings (kWh/yr)	37	37,438	4,405	220	280	0	42,380
Installed Summer peak kW	Door Closer	Total Gross Demand Reduction (kW)	0.0	5.0	0.6	0.0	0.0	0.0	5.7
	Door Closer	Net Adjusted Demand Reduction (kW)	0.0	4.2	0.5	0.0	0.0	0.0	4.8
Installed Winter peak kW	Door Closer	Total Gross Demand Reduction (kW)	-	-	-	-	0.0	-	0.0
	Door Closer	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0	-	0.0



O.18.4 2017–2022 Virginia Non-Residential Prescriptive Program (Phase VI) Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of		Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
				Planned Savings	Not Available		
CNRP	Not available	14,730	25,024	59%	Not Available	69,971,877	0%
CNRP	Schedule GS-4	146,541	25,024	586%	Not Available	6,382,965	1%
CNRP	Schedule GS-3	60,856	25,024	243%	Not Available	463,397	5%
CNRP	Schedule GS-2T	23,597	25,024	94%	Not Available	5,209,333	1%
CNRP	Schedule 6TS	41,809	25,024	167%	Not Available	225,550	2%
CNRP	Schedule 5P	3,967	25,024	16%	Not Available	56,617	5%
CNRP	Schedule 5C	3,004	25,024	12%	Not Available	50,702	14%
CNRP	Schedule 5	7,077	25,024	28%	Not Available	18,532	13%
CNRP	Schedule GS-1	2,334	25,024	9%	Not Available	2,381,598	2%
CNRP	Schedule 10	44,905	25,024	179%	Not Available	Not Available	Not Available
CNRP	Schedule 7	1,085	25,024	4%	Not Available	307,328	4%
CNRP	Schedule GS-2	11,138	25,024	45%	Not Available	397,516	0%
CNRP	Schedule DP-2	1,327	25,024	5%	Not Available		

O.18.5 2017–2022 Virginia Non-Residential Prescriptive Program (Phase VI) Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Prescriptive	2014	VA	PUE-2014-00071	2.96	2.35	2.71	0.96
Non-Residential Prescriptive	2015	VA	PUE-2015-00089	N/A	N/A	N/A	N/A
Non-Residential Prescriptive	2016	VA	PUE-2016-00111	4.26	2.8	2.65	0.62
Non-Residential Prescriptive	2018	VA	PUR-2018-00168	3.27	2.22	1.75	0.58
Non-Residential Prescriptive	2019	VA	PUR-2019-00201	0.82	0.26	0.2	0.21
Non-Residential Prescriptive	2020	VA	PUR-2020-00274	1.08	0.2	0.15	0.14
Non-Residential Prescriptive	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Prescriptive	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Non-Residential Prescriptive	2023	VA	EM&V Report	N/A	N/A	N/A	N/A



O.19 Virginia Non-Residential Prescriptive Enhanced Program (Phase IX) 2021-2022

O.19.1 2021-2022 Virginia Non-Residential Prescriptive Enhanced Program (Phase IX) Annual Indicator Tables

VA - Non-Residential Prescriptive Enhanced Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$1,549	\$236,025	\$237,574
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$33,042	\$5,652,798	\$5,685,839
Costs (\$)		Planned	\$0	\$4,229,167	\$4,229,167
Costs (\$)		Variance	\$33,042	\$1,423,631	\$1,456,673
		Annual % of Planned	N/A	134%	134%
Participants ¹		Total (Gross)	0	366	366
		Planned	0	564	564
		Variance	0	-198	-198
		Annual % of Planned (Gross)	N/A	65%	65%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	8,848,159	8,848,159
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	8,848,159	8,848,159
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	-884,816	-884,816
		Net Adjusted Savings (kWh/yr)	0	7,963,344	7,963,344
		Planned Net Savings (kWh/yr)	0	15,227,492	15,227,492
		Annual % Toward Planned Net Savings	N/A	52.3%	52.3%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	24,175	24,175
		Avg. Net Savings Per Participant (kWh/yr)	N/A	21,758	21,758
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	5,597.9	5,597.9
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	5,597.9	5,597.9
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	-559.8	-559.8
		Net Adjusted Demand Reduction (kW)	0.0	5,038.2	5,038.2
		Planned Net Savings (kW)	0.0	3,222.4	3,222.4
		Annual % Toward Planned Net Reduction	N/A	156.3%	156.3%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	15.3	15.3
		Avg. Net Demand Reduction Per Participant (kW)	N/A	13.8	13.8
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	853.6	853.6
		Realization Rate Weighted by Measure	-	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	853.6	853.6
		Net-To-Gross Rate Weighted by Measure	-	90%	90%
		Net-To-Gross Adjustment (kW)	-	-85.4	-85.4
		Net Adjusted Demand Reduction (kW)	-	768.2	768.2
		Planned Net Savings (kW)	0.0	2,361.2	2,361.2
		Annual % Toward Planned Net Reduction	-	32.5%	32.5%
		Avg. Gross Demand Reduction Per Participant (kW)	-	2.3	2.3
		Avg. Net Demand Reduction Per Participant (kW)	-	2.1	2.1
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$649	\$649
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.03	\$0.03
		Cum. \$Admin. per kW (Gross)	N/A	\$42	\$42
		Cum. \$EM&V per \$Total	80.2%	3.8%	3.8%
		Cum. \$Rebate per Participant (Gross)	N/A	\$11,883	\$11,883



O.19.3 2021-2022 Virginia Non-Residential Prescriptive Enhanced Program (Phase IX) Measure Indicator Tables

VA - Non-Residential Prescriptive Enhanced Program			2021	2022	2021-2022
Measures					
	Guest Room Energy Management	Total Participants	0	3	3
Installed kWh/year	Guest Room Energy Management	Total Gross Energy Savings (kWh/yr)	0	214,084	214,084
	Guest Room Energy Management	Net Adjusted Savings (kWh/yr)	0	192,676	192,676
Installed Summer peak kW	Guest Room Energy Management	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Guest Room Energy Management	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Guest Room Energy Management	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Guest Room Energy Management	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Refrigeration Condenser Coil Cleaning	Total Participants	0	17	17
Installed kWh/year	Refrigeration Condenser Coil Cleaning	Total Gross Energy Savings (kWh/yr)	0	3,456,189	3,456,189
	Refrigeration Condenser Coil Cleaning	Net Adjusted Savings (kWh/yr)	0	3,110,570	3,110,570
Installed Summer peak kW	Refrigeration Condenser Coil Cleaning	Total Gross Demand Reduction (kW)	0.0	250.3	250.3
	Refrigeration Condenser Coil Cleaning	Net Adjusted Demand Reduction (kW)	0.0	225.3	225.3
Installed Winter peak kW	Refrigeration Condenser Coil Cleaning	Total Gross Demand Reduction (kW)	-	250.3	250.3
	Refrigeration Condenser Coil Cleaning	Net Adjusted Demand Reduction (kW)	-	225.3	225.3
	Strip Curtains in Freezers and Coolers	Total Participants	0	22	22
Installed kWh/year	Strip Curtains in Freezers and Coolers	Total Gross Energy Savings (kWh/yr)	0	265,643	265,643
	Strip Curtains in Freezers and Coolers	Net Adjusted Savings (kWh/yr)	0	239,079	239,079
Installed Summer peak kW	Strip Curtains in Freezers and Coolers	Total Gross Demand Reduction (kW)	0.0	30.3	30.3
	Strip Curtains in Freezers and Coolers	Net Adjusted Demand Reduction (kW)	0.0	27.3	27.3
Installed Winter peak kW	Strip Curtains in Freezers and Coolers	Total Gross Demand Reduction (kW)	-	30.3	30.3
	Strip Curtains in Freezers and Coolers	Net Adjusted Demand Reduction (kW)	-	27.3	27.3



VA - Non-Residential Prescriptive Enhanced Program			2021	2022	2021-2022
Measures					
	AC Tune ups	Total Participants	0	337	337
Installed kWh/year	AC Tune ups	Total Gross Energy Savings (kWh/yr)	0	4,326,422	4,326,422
	AC Tune ups	Net Adjusted Savings (kWh/yr)	0	3,893,779	3,893,779
Installed Summer peak kW	AC Tune ups	Total Gross Demand Reduction (kW)	0.0	4,814.7	4,814.7
	AC Tune ups	Net Adjusted Demand Reduction (kW)	0.0	4,333.2	4,333.2
Installed Winter peak kW	AC Tune ups	Total Gross Demand Reduction (kW)	-	277.2	277.2
	AC Tune ups	Net Adjusted Demand Reduction (kW)	-	249.5	249.5
	Auto Closers	Total Participants	0	1	1
Installed kWh/year	Auto Closers	Total Gross Energy Savings (kWh/yr)	0	85	85
	Auto Closers	Net Adjusted Savings (kWh/yr)	0	76	76
Installed Summer peak kW	Auto Closers	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Auto Closers	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Auto Closers	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Auto Closers	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Door Gasket for Freezers and Coolers	Total Participants	0	32	32
Installed kWh/year	Door Gasket for Freezers and Coolers	Total Gross Energy Savings (kWh/yr)	0	10,959	10,959
	Door Gasket for Freezers and Coolers	Net Adjusted Savings (kWh/yr)	0	9,863	9,863
Installed Summer peak kW	Door Gasket for Freezers and Coolers	Total Gross Demand Reduction (kW)	0.0	1.2	1.2
	Door Gasket for Freezers and Coolers	Net Adjusted Demand Reduction (kW)	0.0	1.1	1.1
Installed Winter peak kW	Door Gasket for Freezers and Coolers	Total Gross Demand Reduction (kW)	-	1.2	1.2
	Door Gasket for Freezers and Coolers	Net Adjusted Demand Reduction (kW)	-	1.1	1.1
	Duct Test and Seal	Total Participants	0	225	225
Installed kWh/year	Duct Test and Seal	Total Gross Energy Savings (kWh/yr)	0	574,778	574,778
	Duct Test and Seal	Net Adjusted Savings (kWh/yr)	0	517,301	517,301
Installed Summer peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	0.0	501.4	501.4
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	0.0	451.2	451.2
Installed Winter peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	-	294.5	294.5
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	-	265.0	265.0

O.19.4 2021-2022 Virginia Non-Residential Prescriptive Enhanced Program (Phase IX) Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CNR2	Not available	21,758	1,710	1272%	Not Available	Not Available
CNR2	Schedule G5-4	10,408	1,710	608%	69,971,877	0%
CNR2	Schedule 27	7,368	1,710	431%	Not Available	Not Available
CNR2	Schedule G5-1	6,799	1,710	398%	18,532	37%
CNR2	Schedule 5P	1,917	1,710	112%	225,550	1%
CNR2	Schedule G5-3	103,550	1,710	6054%	6,382,965	2%
CNR2	Schedule 5C	1,913	1,710	112%	56,617	3%
CNR2	Schedule 10	19,168	1,710	1121%	2,381,598	1%
CNR2	Schedule 28	2,611	1,710	153%	Not Available	Not Available
CNR2	Schedule 24	7,933	1,710	464%	Not Available	Not Available
CNR2	Schedule G5-2T	25,075	1,710	1466%	463,397	5%
CNR2	Schedule G5-2	23,039	1,710	1347%	307,328	7%



O.19.5 2021-2022 Virginia Non-Residential Prescriptive Enhanced Program (Phase IX) Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Prescriptive Enhanced	2020	VA	PUR-2020-00274	3.2	1.18	1.25	0.46
Non-Residential Prescriptive Enhanced	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Prescriptive Enhanced	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Non-Residential Prescriptive Enhanced	2023	VA	EM&V Report	4.88	2.21	2.21	0.62



O.20 Virginia Non-Residential Heating and Cooling Efficiency Program (DSM Phase VII) 2019–2022

O.20.1 2019–2022 Virginia Non-Residential Heating and Cooling Efficiency (DSM Phase VII) Program Annual Indicator Tables

VA - Non-Residential Heating and Cooling Efficiency Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$11,566	\$38,539	\$27,297	\$48,993	\$126,395
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$342,194	\$723,971	\$582,157	\$1,173,390	\$2,821,712
Costs (\$)		Planned	\$1,130,793	\$1,921,705	\$1,871,906	\$1,907,579	\$6,831,984
Costs (\$)		Variance	-\$788,599	-\$1,197,735	-\$1,289,750	-\$734,189	-\$4,010,272
		Annual % of Planned	30%	38%	31%	62%	41%
Participants ¹		Total (Gross)	0	30	44	51	125
		Planned	350	658	658	658	2,324
		Variance	-350	-628	-614	-607	-2,199
		Annual % of Planned (Gross)	0%	5%	7%	8%	5%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	2,352,639	527,840	10,356,854	13,237,334
		Realization Rate Weighted by Measure	N/A	100%	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	2,352,639	527,840	10,356,854	13,237,334
		Net-To-Gross Rate Weighted by Measure	N/A	70%	70%	70%	70%
		Net-To-Gross Adjustment (kWh/yr)	0	-705,792	-158,352	-3,107,056	-3,971,200
		Net Adjusted Savings (kWh/yr)	0	1,646,848	369,488	7,249,798	9,266,133
		Planned Net Savings (kWh/yr)	4,351,404	8,180,639	8,180,639	8,180,639	28,893,322
		Annual % Toward Planned Net Savings	0%	20.1%	4.52%	88.6%	32.1%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	78,421	11,996	203,076	105,899
		Avg. Net Savings Per Participant (kWh/yr)	N/A	54,895	8,397	142,153	74,129
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	407.9	58.8	2,809.2	3,275.8
		Realization Rate Weighted by Measure	N/A	100%	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	407.9	58.8	2,809.2	3,275.8
		Net-To-Gross Rate Weighted by Measure	N/A	70%	70%	70%	70%
		Net-To-Gross Adjustment (kW)	0.0	-122.4	-17.6	-842.8	-982.8
		Net Adjusted Demand Reduction (kW)	0.0	285.5	41.1	1,966.4	2,293.1
		Planned Net Savings (kW)	621.0	1,167.4	1,167.4	1,167.4	4,123.1
		Annual % Toward Planned Net Reduction	0%	24.5%	3.52%	168.4%	55.6%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	13.6	1.3	55.1	26.2
		Avg. Net Demand Reduction Per Participant (kW)	N/A	9.5	0.9	38.6	18.3
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	29.0	168.1	197.1
		Realization Rate Weighted by Measure	-	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	29.0	168.1	197.1
		Net-To-Gross Rate Weighted by Measure	-	-	70%	70%	70%
		Net-To-Gross Adjustment (kW)	-	-	-8.7	-50.4	-59.1
		Net Adjusted Demand Reduction (kW)	-	-	20.3	117.7	138.0
		Planned Net Savings (kW)	-	-	1,549.9	1,549.9	5,474.1
		Annual % Toward Planned Net Reduction	-	-	1.31%	7.59%	2.52%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	0.7	3.3	2.1
		Avg. Net Demand Reduction Per Participant (kW)	-	-	0.5	2.3	1.5
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$1,670	\$1,046	\$1,011	\$1,011
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.02	\$0.03	\$0.01	\$0.01
		Cum. \$Admin. per kW (Gross)	N/A	\$123	\$166	\$39	\$39
		Cum. \$EM&V per \$Total	11.1%	12.2%	14.7%	12.3%	12.3%
		Cum. \$Rebate per Participant (Gross)	N/A	\$6,662	\$3,518	\$7,374	\$7,374



O.20.3 2019–2022 Virginia Non-Residential Heating and Cooling Efficiency (DSM Phase VII) Program Measure Indicator Tables

VA - Non-Residential Heating and Cooling Efficiency Program			2019	2020	2021	2022	2019-2022
Measures							
	Variable Frequency Drives (VFD)	Total Participants	0	12	17	41	70
Installed kWh/year	Variable Frequency Drives (VFD)	Total Gross Energy Savings (kWh/yr)	0	1,164,484	397,329	7,937,854	9,499,667
	Variable Frequency Drives (VFD)	Net Adjusted Savings (kWh/yr)	0	815,138	278,131	5,556,498	6,649,767
Installed Summer peak kW	Variable Frequency Drives (VFD)	Total Gross Demand Reduction (kW)	0.0	16.9	14.1	116.1	147.1
	Variable Frequency Drives (VFD)	Net Adjusted Demand Reduction (kW)	0.0	11.8	9.9	81.3	103.0
Installed Winter peak kW	Variable Frequency Drives (VFD)	Total Gross Demand Reduction (kW)	-	-	20.0	164.7	184.8
	Variable Frequency Drives (VFD)	Net Adjusted Demand Reduction (kW)	-	-	14.0	115.3	129.3

VA - Non-Residential Heating and Cooling Efficiency Program			2019	2020	2021	2022	2019-2022
Measures							
	Chiller Upgrade	Total Participants	0	5	1	3	9
Installed kWh/year	Chiller Upgrade	Total Gross Energy Savings (kWh/yr)	0	452,363	26,961	638,627	1,117,952
	Chiller Upgrade	Net Adjusted Savings (kWh/yr)	0	316,654	18,873	447,039	782,566
Installed Summer peak kW	Chiller Upgrade	Total Gross Demand Reduction (kW)	0.0	275.2	15.2	2,365.6	2,655.9
	Chiller Upgrade	Net Adjusted Demand Reduction (kW)	0.0	192.6	10.6	1,655.9	1,859.1
Installed Winter peak kW	Chiller Upgrade	Total Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
	Chiller Upgrade	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0	0.0
	Economizers	Total Participants	0	19	6	19	44
Installed kWh/year	Economizers	Total Gross Energy Savings (kWh/yr)	0	49,060	13,967	288,653	351,679
	Economizers	Net Adjusted Savings (kWh/yr)	0	34,342	9,777	202,057	246,175
Installed Summer peak kW	Economizers	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Economizers	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Economizers	Total Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
	Economizers	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0	0.0
	Heat Pump Upgrade	Total Participants	0	7	14	6	27
Installed kWh/year	Heat Pump Upgrade	Total Gross Energy Savings (kWh/yr)	0	463,739	60,826	13,472	538,037
	Heat Pump Upgrade	Net Adjusted Savings (kWh/yr)	0	324,618	42,578	9,431	376,626
Installed Summer peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	0.0	57.2	10.5	3.7	71.4
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	0.0	40.0	7.3	2.6	50.0
Installed Winter peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	-	-	8.9	3.4	12.3
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	-	-	6.3	2.4	8.6
	Unitary AC	Total Participants	0	16	17	22	55
Installed kWh/year	Unitary AC	Total Gross Energy Savings (kWh/yr)	0	222,993	28,757	1,478,248	1,729,999
	Unitary AC	Net Adjusted Savings (kWh/yr)	0	156,095	20,130	1,034,774	1,210,999
Installed Summer peak kW	Unitary AC	Total Gross Demand Reduction (kW)	0.0	58.6	19.0	323.8	401.4
	Unitary AC	Net Adjusted Demand Reduction (kW)	0.0	41.0	13.3	226.6	281.0
Installed Winter peak kW	Unitary AC	Total Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
	Unitary AC	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0	0.0



O.20.4 2019–2022 Virginia Non-Residential Heating and Cooling Efficiency (DSM Phase VII) Program
Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CHV3	Not available	74,129	12,433	596%	Not Available	Not Available
CHV3	Schedule GS-4	507,841	12,433	4085%	69,971,877	1%
CHV3	Schedule GS-1	15,275	12,433	123%	18,532	82%
CHV3	Schedule 5C	6,047	12,433	49%	56,617	11%
CHV3	Schedule 10	259,391	12,433	2086%	2,381,598	11%
CHV3	Schedule 7	5,144	12,433	41%	Not Available	Not Available
CHV3	Schedule GS-3	494,830	12,433	3980%	6,382,965	8%
CHV3	Schedule GS-2	47,382	12,433	381%	307,328	15%
CHV3	Schedule GS-2T	17,050	12,433	137%	463,397	4%

O.20.5 2019–2022 Virginia Non-Residential Heating and Cooling Efficiency (DSM Phase VII) Program
Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Heating and Cooling Efficiency	2018	VA	PUR-2018-00168	1.86	2.71	1.29	0.68
Non-Residential Heating and Cooling Efficiency	2019	VA	PUR-2019-00201	N/A	N/A	N/A	N/A
Non-Residential Heating and Cooling Efficiency	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Non-Residential Heating and Cooling Efficiency	2021	VA	PUR-2021-00247	8.56	19.63	9.1	1.23
Non-Residential Heating and Cooling Efficiency	2022	VA	PUR-2022-00210	6.27	13.31	6.1	1.13
Non-Residential Heating and Cooling Efficiency	2023	VA	EM&V Report	18.92	39.23	18.27	1.14



O.21 Virginia Non-Residential Lighting Systems & Controls Program (DSM Phase VII) 2019–2022

O.21.1 2019–2022 Virginia Non-Residential Lighting Systems & Controls (DSM Phase VII) Program Annual Indicator Tables

VA - Non-Residential Lighting Systems & Controls Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$20,021	\$203,084	\$165,869	\$114,789	\$503,763
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$592,373	\$3,989,872	\$3,537,467	\$2,749,190	\$10,868,902
Costs (\$)		Planned	\$1,633,867	\$2,905,369	\$2,192,482	\$2,221,698	\$8,953,416
Costs (\$)		Variance	-\$1,041,495	\$1,084,503	\$1,344,986	\$527,493	\$1,915,487
		Annual % of Planned	36%	137%	161%	124%	121%
Participants ¹		Total (Gross)	0	406	388	193	987
		Planned	333	625	344	344	1,646
		Variance	-333	-219	44	-151	-659
		Annual % of Planned (Gross)	0%	65%	113%	56%	60%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	29,189,250	22,546,913	16,583,111	68,319,273
		Realization Rate Weighted by Measure	N/A	124%	124%	124%	124%
		Realization Rate Adjustment (kWh/yr)	0	7,005,420	5,411,259	3,979,947	16,396,626
		Realization Rate Adjusted Savings (kWh/yr)	0	36,194,669	27,958,172	20,563,057	84,715,899
		Net-To-Gross Rate Weighted by Measure	N/A	45%	45%	45%	45%
		Net-To-Gross Adjustment (kWh/yr)	0	-19,907,068	-15,376,995	-11,309,682	-46,593,744
		Net Adjusted Savings (kWh/yr)	0	16,287,601	12,581,177	9,253,376	38,122,155
		Planned Net Savings (kWh/yr)	6,994,405	13,127,636	6,659,477	6,659,477	33,440,994
		Annual % Toward Planned Net Savings	0%	124.1%	188.9%	139.0%	114.0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	71,895	58,111	85,923	69,219
		Avg. Net Savings Per Participant (kWh/yr)	N/A	40,117	32,426	47,945	38,624
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	4,019.8	3,194.9	2,581.9	9,796.6
		Realization Rate Weighted by Measure	N/A	102%	102%	102%	102%
		Realization Rate Adjustment (kW)	0.0	80.4	63.9	51.6	195.9
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	4,100.2	3,258.8	2,633.6	9,992.6
		Net-To-Gross Rate Weighted by Measure	N/A	45%	45%	45%	45%
		Net-To-Gross Adjustment (kW)	0.0	-2,210.9	-1,757.2	-1,420.1	-5,388.1
		Net Adjusted Demand Reduction (kW)	0.0	1,845.1	1,466.5	1,185.1	4,496.7
		Planned Net Savings (kW)	1,945.3	3,651.1	1,436.4	1,436.4	8,469.1
		Annual % Toward Planned Net Reduction	0%	50.5%	102.1%	82.5%	53.1%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	9.9	8.2	13.4	9.9
		Avg. Net Demand Reduction Per Participant (kW)	N/A	4.5	3.8	6.1	4.6
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	2,487.7	1,772.8	4,260.5
		Realization Rate Weighted by Measure	-	-	99%	99%	99%
		Realization Rate Adjustment (kW)	-	-	-24.9	-17.7	-42.6
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	2,462.8	1,755.0	4,217.8
		Net-To-Gross Rate Weighted by Measure	-	-	45%	45%	45%
		Net-To-Gross Adjustment (kW)	-	-	-1,368.2	-975.0	-2,343.2
		Net Adjusted Demand Reduction (kW)	-	-	1,108.3	789.8	1,898.0
		Planned Net Savings (kW)	0.0	0.0	1,326.7	1,326.7	2,653.5
		Annual % Toward Planned Net Reduction	-	-	83.5%	59.5%	71.5%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	6.4	9.2	7.3
		Avg. Net Demand Reduction Per Participant (kW)	-	-	2.9	4.1	3.3
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$550	\$490	\$510	\$510
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.01	\$0.01	\$0.01	\$0.01
		Cum. \$Admin. per kW (Gross)	N/A	\$56	\$54	\$51	\$51
		Cum. \$EM&V per \$Total	8.4%	3.2%	3.3%	4.4%	4.4%
		Cum. \$Rebate per Participant (Gross)	N/A	\$6,717	\$6,201	\$6,499	\$6,499



O.21.3 2019–2022 Virginia Non-Residential Lighting Systems & Controls (DSM Phase VII) Program
Measure Indicator Tables

VA - Non-Residential Lighting Systems & Controls Program		2019	2020	2021	2022	2019-2022
Measures						
LED Lamps	Total Participants	0	406	387	193	986
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	28,703,462	22,202,144	16,168,637	67,074,243
LED Lamps	Net Adjusted Savings (kWh/yr)	0	16,016,532	12,388,797	9,022,100	37,427,428
Installed Summer peak kW	Total Gross Demand Reduction (kW)	0.0	3,962.0	3,158.2	2,536.4	9,656.6
Installed Winter peak kW	Net Adjusted Demand Reduction (kW)	0.0	1,818.6	1,449.6	1,164.2	4,432.4
LED Lamps	Total Gross Demand Reduction (kW)	-	-	2,466.7	1,755.9	4,222.6
LED Lamps	Net Adjusted Demand Reduction (kW)	-	-	1,132.2	805.9	1,938.2
Occupancy Sensors	Total Participants	0	30	25	33	88
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	485,788	300,036	402,337	1,188,160
Occupancy Sensors	Net Adjusted Savings (kWh/yr)	0	271,070	167,420	224,504	662,993
Installed Summer peak kW	Total Gross Demand Reduction (kW)	0.0	57.8	25.5	42.8	126.2
Installed Winter peak kW	Net Adjusted Demand Reduction (kW)	0.0	26.5	11.7	19.7	57.9
Occupancy Sensors	Total Gross Demand Reduction (kW)	-	-	18.1	15.8	33.9
Occupancy Sensors	Net Adjusted Demand Reduction (kW)	-	-	8.3	7.3	15.6
T8/T5 Lamps	Total Participants	0	0	2	2	4
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	0	44,733	12,137	56,870
T8/T5 Lamps	Net Adjusted Savings (kWh/yr)	0	0	24,961	6,772	31,734
Installed Summer peak kW	Total Gross Demand Reduction (kW)	0.0	0.0	11.2	2.6	13.9
Installed Winter peak kW	Net Adjusted Demand Reduction (kW)	0.0	0.0	5.1	1.2	6.4
T8/T5 Lamps	Total Gross Demand Reduction (kW)	-	-	2.9	1.1	4.0
T8/T5 Lamps	Net Adjusted Demand Reduction (kW)	-	-	1.3	0.5	1.8



O.21.4 2019–2022 Virginia Non-Residential Lighting Systems & Controls (DSM Phase VII) Program
Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CLT3	Not available	38,624	21,004	184%	Not Available	Not Available
CLT3	Schedule GS-1	13,504	21,004	64%	18,532	73%
CLT3	Schedule 10	63,922	21,004	304%	2,381,598	3%
CLT3	Schedule 5	47,675	21,004	227%	50,702	94%
CLT3	Schedule GS-2	51,677	21,004	246%	307,328	17%
CLT3	Schedule 28	17,613	21,004	84%	Not Available	Not Available
CLT3	Schedule GS-2T	65,265	21,004	311%	463,397	14%
CLT3	Schedule 27	22,663	21,004	108%	Not Available	Not Available
CLT3	Not Available	38,220	21,004	182%	Not Available	Not Available
CLT3	Schedule 5P	32,595	21,004	155%	225,550	14%
CLT3	Schedule DP-2	119,259	21,004	568%	397,516	30%
CLT3	Schedule GS-3	55,934	21,004	266%	6,382,965	1%
CLT3	Schedule 5C	26,979	21,004	128%	56,617	48%

O.21.5 2019–2022 Virginia Non-Residential Lighting Systems & Controls (DSM Phase VII) Program Benefit
Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Lighting Systems & Controls	2018	VA	PUR-2018-00168	3.06	1.71	1.37	0.58
Non-Residential Lighting Systems & Controls	2019	VA	PUR-2019-00201	N/A	N/A	N/A	N/A
Non-Residential Lighting Systems & Controls	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Non-Residential Lighting Systems & Controls	2021	VA	PUR-2021-00247	9.48	3.24	2.66	0.48
Non-Residential Lighting Systems & Controls	2022	VA	PUR-2022-00210	29.77	11.09	9.12	0.56
Non-Residential Lighting Systems & Controls	2023	VA	EM&V Report				



O.22 Virginia Non-Residential Small Manufacturing Program 2019–2022

O.22.1 2019–2022 Virginia Non-Residential Small Manufacturing Program Annual Indicator Tables

VA - Non-Residential Small Manufacturing Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$12,414	\$17,681	\$13,158	\$29,048	\$72,301
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$367,297	\$331,721	\$280,616	\$695,693	\$1,675,327
Costs (\$)		Planned	\$862,936	\$1,226,932	\$1,235,523	\$1,244,758	\$4,570,148
Costs (\$)		Variance	-\$495,639	-\$895,211	-\$954,907	-\$549,065	-\$2,894,821
		Annual % of Planned	43%	27%	23%	56%	37%
Participants ¹		Total (Gross)	0	0	1	19	20
		Planned	35	66	66	66	233
		Variance	-35	-66	-65	-47	-213
		Annual % of Planned (Gross)	0%	0%	2%	29%	9%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	112,237	4,886,095	4,998,332
		Realization Rate Weighted by Measure	N/A	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	112,237	4,886,095	4,998,332
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	0	-11,224	-488,610	-499,833
		Net Adjusted Savings (kWh/yr)	0	0	101,013	4,397,486	4,498,499
		Planned Net Savings (kWh/yr)	1,599,156	3,015,551	3,015,551	3,015,551	10,645,810
		Annual % Toward Planned Net Savings	0%	0%	3.35%	145.8%	42.3%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	112,237	257,163	249,917
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	101,013	231,447	224,925
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	23.2	582.2	605.4
		Realization Rate Weighted by Measure	N/A	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	23.2	582.2	605.4
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	0.0	-2.3	-58.2	-60.5
		Net Adjusted Demand Reduction (kW)	0.0	0.0	20.9	524.0	544.9
		Planned Net Savings (kW)	336.7	634.9	634.9	634.9	2,241.3
		Annual % Toward Planned Net Reduction	0%	0%	3.29%	82.5%	24.3%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	23.2	30.6	30.3
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	20.9	27.6	27.2
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	23.2	582.2	605.4
		Realization Rate Weighted by Measure	-	-	-	-	100%
		Realization Rate Adjustment (kW)	-	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	23.2	582.2	605.4
		Net-To-Gross Rate Weighted by Measure	-	-	90%	90%	90%
		Net-To-Gross Adjustment (kW)	-	-	-2.3	-58.2	-60.5
		Net Adjusted Demand Reduction (kW)	-	-	20.9	524.0	544.9
		Planned Net Savings (kW)	-	-	634.9	634.9	2,241.3
		Annual % Toward Planned Net Reduction	-	-	3.29%	82.5%	24.3%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	23.2	30.6	30.3
		Avg. Net Demand Reduction Per Participant (kW)	-	-	20.9	27.6	27.2
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	\$43,253	\$3,615	\$3,615
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	\$0	\$0.01	\$0.01
		Cum. \$Admin. per kW (Gross)	N/A	N/A	\$1,864	\$119	\$119
		Cum. \$EM&V per \$Total	20.8%	25.1%	22.7%	18.1%	18.1%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	\$10,307	\$17,149	\$17,149



O.22.2 2022 Virginia Non-Residential Small Manufacturing Program Monthly Indicator Tables

VA - Non-Residential Small Manufacturing Program		2022												2019-2022		
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total
O&M (\$)	Direct Rebate		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	Direct EM&V		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	Indirect Other (Administrative)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital (\$)	Direct Implementation		\$602	\$1,106	\$777	\$824	\$992	\$904	\$604	\$9,044	\$2,473	\$1,812	\$4,334	\$5,573	\$29,048	\$72,301
Costs (\$)	Total		\$14,407	\$26,500	\$18,620	\$19,745	\$23,766	\$21,640	\$14,477	\$216,600	\$59,235	\$43,408	\$103,810	\$133,484	\$695,693	\$1,676,327
Costs (\$)	Planned		\$103,730	\$103,730	\$103,730	\$103,730	\$103,730	\$103,730	\$103,730	\$103,730	\$103,730	\$103,730	\$103,730	\$103,730	\$1,244,758	\$4,570,148
Costs (\$)	Variance		-\$89,323	-\$77,230	-\$85,109	-\$83,985	-\$79,963	-\$82,090	-\$89,253	\$112,870	-\$44,495	-\$60,322	\$80	\$29,754	-\$549,065	-\$2,894,821
	Annual % of Planned		1.2%	3.3%	4.8%	6.4%	8.3%	10.0%	11.2%	28.6%	33.3%	36.8%	46.2%	55.9%	56%	37%
Participants ¹	Total (Gross)		0	1	0	0	0	0	0	0	6	2	1	4	5	19
	Planned		11	5	5	5	5	5	5	5	5	5	5	5	66	233
	Variance		-11	-4	-5	-5	-5	-5	-5	-5	-1	-3	-4	-1	0	-47
	Annual % of Planned		0%	2%	2%	2%	2%	2%	2%	11%	14%	15%	21%	29%	29%	9%
Installed kWh/year	Total		0	42,050	0	0	0	0	0	0	2,568,067	314,081	212,391	537,708	1,211,797	4,886,095
	Realization Rate Weighted by Measure		N/A	100%	N/A	N/A	N/A	N/A	N/A	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)		0	42,050	0	0	0	0	0	0	2,568,067	314,081	212,391	537,708	1,211,797	4,886,095
	Net-To-Gross Rate Weighted by Measure		N/A	90%	N/A	N/A	N/A	N/A	N/A	90%	90%	90%	90%	90%	90%	90%
	Net-To-Gross Adjustment (kWh/yr)		0	-4,205	0	0	0	0	0	0	-256,807	-31,408	-21,239	-53,771	-121,160	-498,833
	Net Adjusted Savings (kWh/yr)		0	37,845	0	0	0	0	0	0	2,311,261	282,673	191,152	483,937	1,090,637	4,387,262
	Planned Net Savings (kWh/yr)		502,592	228,451	228,451	228,451	228,451	228,451	228,451	228,451	228,451	228,451	228,451	228,451	2,845,111	10,645,810
	Annual % Toward Planned Net Savings		0%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	77.9%	87.3%	93.6%	109.7%	145.8%	145.8%	42.3%
	Avg. Gross Savings Per Participant (kWh/yr)		N/A	42,050	N/A	N/A	N/A	N/A	N/A	428,011	157,041	212,391	134,427	242,359	257,163	249,917
	Avg. Net Savings Per Participant (kWh/yr)		N/A	37,845	N/A	N/A	N/A	N/A	N/A	385,210	141,336	191,152	120,984	218,124	231,447	224,925
Installed Summer peak kW	Total		0.0	9.1	0.0	0.0	0.0	0.0	0.0	283.1	35.7	48.5	68.8	137.0	582.2	605.4
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	9.1	0.0	0.0	0.0	0.0	0.0	283.1	35.7	48.5	68.8	137.0	582.2	605.4
	Net-To-Gross Rate Weighted by Measure		100%	90%	100%	100%	100%	100%	100%	90%	90%	90%	90%	90%	90%	90%
	Net-To-Gross Adjustment (kW)		0.0	-0.9	0.0	0.0	0.0	0.0	0.0	-28.3	-3.6	-4.9	-6.9	-13.7	-58.2	-60.5
	Net Adjusted Demand Reduction (kW)		0.0	8.2	0.0	0.0	0.0	0.0	0.0	254.8	32.1	43.7	61.9	123.3	524.0	544.9
	Planned Net Savings (kW)		105.8	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	634.9	2,241.3
	Annual % Toward Planned Net Reduction		0%	1.29%	1.29%	1.29%	1.29%	1.29%	1.29%	41.4%	46.5%	53.4%	63.1%	82.5%	82.5%	24.3%
	Avg. Gross Demand Reduction Per Participant (kW)		N/A	9.1	N/A	N/A	N/A	N/A	N/A	47.2	17.9	48.5	17.2	27.4	30.6	30.3
	Avg. Net Demand Reduction Per Participant (kW)		N/A	8.2	N/A	N/A	N/A	N/A	N/A	42.5	16.1	43.7	15.5	24.7	27.6	27.2
Installed Winter peak kW	Total		-	9.1	-	-	-	-	-	283.1	35.7	48.5	68.8	137.0	582.2	605.4
	Realization Rate Weighted by Measure		-	100%	-	-	-	-	-	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Adjustment (kW)		-	0.0	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)		-	9.1	-	-	-	-	-	283.1	35.7	48.5	68.8	137.0	582.2	605.4
	Net-To-Gross Rate Weighted by Measure		-	90%	-	-	-	-	-	90%	90%	90%	90%	90%	90%	90%
	Net-To-Gross Adjustment (kW)		-	-0.9	-	-	-	-	-	-28.3	-3.6	-4.9	-6.9	-13.7	-58.2	-60.5
	Net Adjusted Demand Reduction (kW)		-	8.2	-	-	-	-	-	254.8	32.1	43.7	61.9	123.3	524.0	544.9
	Planned Net Savings (kW)		-	48.1	-	-	-	-	-	48.1	48.1	48.1	48.1	48.1	634.9	2,241.3
	Annual % Toward Planned Net Reduction		-	1.29%	-	-	-	-	-	41.4%	46.5%	53.4%	63.1%	82.5%	82.5%	24.3%
	Avg. Gross Demand Reduction Per Participant (kW)		-	9.1	-	-	-	-	-	47.2	17.9	48.5	17.2	27.4	30.6	30.3
	Avg. Net Demand Reduction Per Participant (kW)		-	8.2	-	-	-	-	-	42.5	16.1	43.7	15.5	24.7	27.6	27.2
Program Performance	Cum. \$Admin. per Participant (Gross)		\$43,855	\$22,461	\$22,869	\$23,282	\$23,776	\$24,229	\$24,532	\$7,263	\$6,056	\$5,672	\$4,448	\$3,615	\$3,615	\$3,615
	Cum. \$Admin. per kWh/year (Gross)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0.02	\$0.02	\$0.02	\$0.02	\$0.01	\$0.01	\$0.01
	Cum. \$Admin. per kW (Gross)		\$1,890	\$1,392	\$1,416	\$1,442	\$1,472	\$1,500	\$1,519	\$1,84	\$1,73	\$1,66	\$1,42	\$1,19	\$1,19	\$1,19
	Cum. \$EM&V per \$Total		22.4%	22.1%	22.1%	22.1%	22.4%	22.3%	22.1%	20.1%	19.1%	20.0%	19.6%	18.1%	18.1%	18.1%
	Cum. \$Rebate per Participant (Gross)		\$10,307	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$22,527	\$20,220	\$19,733	\$16,909	\$17,149	\$17,149	\$17,149



O.22.3 2019–2022 Virginia Non-Residential Small Manufacturing Program Measure Indicator Tables

VA - Non-Residential Small Manufacturing Program		2019	2020	2021	2022	2019-2022
Measures						
	VSD/Air-compressor Downsize	0	0	0	1	1
Installed kWh/year	VSD/Air-compressor Downsize	0	0	0	177,192	177,192
	VSD/Air-compressor Downsize	0	0	0	159,472	159,472
Installed Summer peak kW	VSD/Air-compressor Downsize	0.0	0.0	0.0	19.3	19.3
	VSD/Air-compressor Downsize	0.0	0.0	0.0	17.4	17.4
Installed Winter peak kW	VSD/Air-compressor Downsize	-	-	-	19.3	19.3
	VSD/Air-compressor Downsize	-	-	-	17.4	17.4



VA - Non-Residential Small Manufacturing Program		2019	2020	2021	2022	2019-2022
Measures						
	Low Pressure-Drop Filter	0	0	1	10	11
Installed kWh/year	Low Pressure-Drop Filter	0	0	942	57,034	57,976
	Low Pressure-Drop Filter	0	0	847	51,331	52,178
Installed Summer peak kW	Low Pressure-Drop Filter	0.0	0.0	0.2	7.6	7.8
	Low Pressure-Drop Filter	0.0	0.0	0.2	6.8	7.0
Installed Winter peak kW	Low Pressure-Drop Filter	-	-	0.2	7.6	7.8
	Low Pressure-Drop Filter	-	-	0.2	6.8	7.0
	No-Loss Condensate Drain	0	0	1	12	13
Installed kWh/year	No-Loss Condensate Drain	0	0	5,407	139,248	144,654
	No-Loss Condensate Drain	0	0	4,866	125,323	130,189
Installed Summer peak kW	No-Loss Condensate Drain	0.0	0.0	1.1	17.6	18.7
	No-Loss Condensate Drain	0.0	0.0	1.0	15.8	16.8
Installed Winter peak kW	No-Loss Condensate Drain	-	-	1.1	17.6	18.7
	No-Loss Condensate Drain	-	-	1.0	15.8	16.8
	Pressure Reduction	0	0	1	10	11
Installed kWh/year	Pressure Reduction	0	0	5,784	313,550	319,334
	Pressure Reduction	0	0	5,206	282,195	287,401
Installed Summer peak kW	Pressure Reduction	0.0	0.0	1.1	38.7	39.8
	Pressure Reduction	0.0	0.0	1.0	34.8	35.8
Installed Winter peak kW	Pressure Reduction	-	-	1.1	38.7	39.8
	Pressure Reduction	-	-	1.0	34.8	35.8
	VSD at Air Compressor	0	0	0	4	4
Installed kWh/year	VSD at Air Compressor	0	0	0	762,599	762,599
	VSD at Air Compressor	0	0	0	686,339	686,339
Installed Summer peak kW	VSD at Air Compressor	0.0	0.0	0.0	113.1	113.1
	VSD at Air Compressor	0.0	0.0	0.0	101.8	101.8
Installed Winter peak kW	VSD at Air Compressor	-	-	-	113.1	113.1
	VSD at Air Compressor	-	-	-	101.8	101.8



VA - Non-Residential Small Manufacturing Program		2019	2020	2021	2022	2019-2022
Measures						
	Add Storage	0	0	1	7	8
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	0	6,549	92,104	98,652
	Net Adjusted Savings (kWh/yr)	0	0	5,894	82,893	88,787
Installed Summer peak kW	Total Gross Demand Reduction (kW)	0.0	0.0	1.4	14.4	15.8
	Net Adjusted Demand Reduction (kW)	0.0	0.0	1.3	13.0	14.2
Installed Winter peak kW	Total Gross Demand Reduction (kW)	-	-	1.4	14.4	15.8
	Net Adjusted Demand Reduction (kW)	-	-	1.3	13.0	14.2
	Total Participants	0	0	1	6	7
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	0	832	28,527	29,359
	Net Adjusted Savings (kWh/yr)	0	0	749	25,674	26,423
Installed Summer peak kW	Total Gross Demand Reduction (kW)	0.0	0.0	0.2	5.5	5.7
	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.2	5.0	5.1
Installed Winter peak kW	Total Gross Demand Reduction (kW)	-	-	0.2	5.5	5.7
	Net Adjusted Demand Reduction (kW)	-	-	0.2	5.0	5.1
	Total Participants	0	0	1	0	1
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	0	55,058	0	55,058
	Net Adjusted Savings (kWh/yr)	0	0	49,553	0	49,553
Installed Summer peak kW	Total Gross Demand Reduction (kW)	0.0	0.0	11.4	0.0	11.4
	Net Adjusted Demand Reduction (kW)	0.0	0.0	10.3	0.0	10.3
Installed Winter peak kW	Total Gross Demand Reduction (kW)	-	-	11.4	-	11.4
	Net Adjusted Demand Reduction (kW)	-	-	10.3	-	10.3
	Total Participants	0	0	1	11	12
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	0	0	37,665	3,315,842	3,353,507
	Net Adjusted Savings (kWh/yr)	0	0	33,898	2,984,258	3,018,156
Installed Summer peak kW	Total Gross Demand Reduction (kW)	0.0	0.0	7.8	366.0	373.8
	Net Adjusted Demand Reduction (kW)	0.0	0.0	7.0	329.4	336.4
Installed Winter peak kW	Total Gross Demand Reduction (kW)	-	-	7.8	366.0	373.8
	Net Adjusted Demand Reduction (kW)	-	-	7.0	329.4	336.4



O.22.4 2019–2022 Virginia Non-Residential Small Manufacturing Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CTSM	Not available	224924.9396	45,690	492%	Not Available	Not Available
CTSM	Schedule 6TS	40134.033	45,690	88%	5,209,333	1%
CTSM	Schedule GS-1	369998.9055	45,690	810%	18,532	1997%
CTSM	Schedule 10 (Prim. & Trans.)	269418.654	45,690	590%	8,723,317	3%
CTSM	Schedule GS-2T	81703.15425	45,690	179%	463,397	18%
CTSM	Schedule 10	74240.847	45,690	162%	2,381,598	3%
CTSM	Schedule GS-2	113529.1256	45,690	248%	307,328	37%
CTSM	Schedule GS-3	726316.701	45,690	1590%	6,382,965	11%

O.22.5 2019–2022 Virginia Non-Residential Small Manufacturing Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Small Manufacturing	2018	VA	PUR-2018-00168	3.11	1.37	1.27	0.53
Non-Residential Small Manufacturing	2019	VA	PUR-2019-00201	N/A	N/A	N/A	N/A
Non-Residential Small Manufacturing	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Non-Residential Small Manufacturing	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Small Manufacturing	2022	VA	PUR-2022-00210	7.67	2.74	2.52	0.52
Non-Residential Small Manufacturing	2023	VA	EM&V Report	20.59	6.16	5.76	0.48



O.23 Virginia Non-Residential Window Film Program (DSM Phase VII) 2019–2022

O.23.1 2019–2022 Virginia Non-Residential Window Film (DSM Phase VII) Program Annual Indicator Tables

VA - Non-Residential Window Film Program			2019	2020	2021	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$6,494	\$19,045	\$15,262	\$52,231
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$192,146	\$356,882	\$325,497	\$1,148,259
Costs (\$)		Planned	\$317,588	\$445,263	\$435,863	\$1,643,344
Costs (\$)		Variance	-\$125,441	-\$88,381	-\$110,366	-\$495,085
		Annual % of Planned	61%	80%	75%	70%
Participants ¹		Total (Gross)	0	22	19	69
		Total Square Feet	0	62,925	21,212	101,848
		Planned Square Feet	68,400	125,913	125,913	446,139
		Variance Square Feet	-68,400	-62,988	-104,701	-344,291
		Annual % of Planned (Gross)	0%	50%	17%	23%
Square Feet		Total Square Feet	0	62,925	21,212	101,848
		North Facing	0	23,874	9,861	37,242
		East Facing	0	11,852	9,480	26,746
		West Facing	0	3,002	1,431	6,612
		South Facing	0	24,197	440	31,248
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	250,377	79,659	510,331
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	250,377	79,659	510,331
		Net-To-Gross Rate Weighted by Measure	N/A	80%	80%	80%
		Net-To-Gross Adjustment (kWh/yr)	0	-50,075	-15,932	-102,066
		Net Adjusted Savings (kWh/yr)	0	200,302	63,727	408,265
		Planned Net Savings (kWh/yr)	902,880	1,662,052	1,662,052	5,889,035
		Annual % Toward Planned Net Savings	0%	12.1%	3.83%	6.93%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	11,381	4,193	7,396
		Avg. Gross Savings Per Square Feet (kWh/yr)	N/A	4.0	3.8	5.0
		Avg. Net Savings Per Participant (kWh/yr)	N/A	9,105	3,354	5,917
		Avg. Net Savings Per Square Feet (kWh/yr)	N/A	3.2	3.0	4.0
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	78.1	0.0	78.1
		Realization Rate Weighted by Measure	N/A	100%	N/A	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	78.1	0.0	78.1
		Net-To-Gross Rate Weighted by Measure	N/A	80%	N/A	80%
		Net-To-Gross Adjustment (kW)	0.0	-15.6	0.0	-15.6
		Net Adjusted Demand Reduction (kW)	0.0	62.5	0.0	62.5
		Planned Net Savings (kW)	262.7	483.5	483.5	1,713.2
		Annual % Toward Planned Net Reduction	0%	12.9%	0%	3.65%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	3.5	0.0	1.1
		Avg. Gross Demand Reduction Per Square Feet (kW)	N/A	0.001	0.0	0.001
		Avg. Net Demand Reduction Per Participant (kW)	N/A	2.8	0.0	0.9
		Avg. Net Demand Reduction Square Feet (kW)	N/A	0.001	0.0	0.001
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	0.0	0.0
		Realization Rate Weighted by Measure	-	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0
		Planned Net Savings (kW)	-	-	381.8	1,352.7
		Annual % Toward Planned Net Reduction	-	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-
		Avg. Gross Demand Reduction Per Square Feet (kW)	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-
		Avg. Net Demand Reduction Square Feet (kW)	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$1,161	\$995	\$757
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	\$327	\$523	\$669
		Cum. \$EM&V per \$Total	15.4%	16.3%	17.6%	16.2%
		Cum. \$Rebate per Participant (Gross)	N/A	\$2,465	\$1,833	\$1,577



O.23.3 2019–2022 Virginia Non-Residential Window Film (DSM Phase VII) Program Measure Indicator Tables

VA - Non-Residential Window Film Program		2019	2020	2021	2022	2019-2022
Measures						
	East	0	9	7	14	30
Installed kWh/year	East	0	80,582	54,707	79,281	214,571
	East	0	64,466	43,766	63,425	171,656
Installed Summer peak kW	East	0.0	22.3	0.0	0.0	22.3
	East	0.0	17.8	0.0	0.0	17.8
Installed Winter peak kW	East	-	-	0.0	0.0	0.0
	East	-	-	0.0	0.0	0.0
	North	0	7	7	5	19
Installed kWh/year	North	0	41,054	19,111	5,246	65,410
	North	0	32,843	15,289	4,197	52,328
Installed Summer peak kW	North	0.0	13.9	0.0	0.0	13.9
	North	0.0	11.2	0.0	0.0	11.2
Installed Winter peak kW	North	-	-	0.0	0.0	0.0
	North	-	-	0.0	0.0	0.0
	South	0	9	3	12	24
Installed kWh/year	South	0	84,173	818	58,121	143,111
	South	0	67,339	654	46,497	114,489
Installed Summer peak kW	South	0.0	23.1	0.0	0.0	23.1
	South	0.0	18.5	0.0	0.0	18.5
Installed Winter peak kW	South	-	-	0.0	0.0	0.0
	South	-	-	0.0	0.0	0.0
	West	0	5	6	6	17
Installed kWh/year	West	0	44,568	5,023	37,648	87,239
	West	0	35,654	4,018	30,119	69,791
Installed Summer peak kW	West	0.0	18.7	0.0	0.0	18.7
	West	0.0	15.0	0.0	0.0	15.0
Installed Winter peak kW	West	-	-	0.0	0.0	0.0
	West	-	-	0.0	0.0	0.0



O.23.4 2019–2022 Virginia Non-Residential Window Film (DSM Phase VII) Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CSW2	Not available	5,917	13	44825%	Not Available	Not Available
CSW2	Schedule GS-3	121,838	13	923015%	6,382,965	2%
CSW2	Schedule GS-2	11,185	13	84733%	307,328	4%
CSW2	Schedule GS-1	410	13	3108%	18,532	2%
CSW2	Schedule GS-2T	351	13	2660%	463,397	0%

O.23.5 2019–2022 Virginia Non-Residential Window Film (DSM Phase VII) Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Window Film	2018	VA	PUR-2018-00168	3.63	1.87	1.42	0.62
Non-Residential Window Film	2019	VA	PUR-2019-00201	N/A	N/A	N/A	N/A
Non-Residential Window Film	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Non-Residential Window Film	2021	VA	PUR-2021-00247	1.49	0.47	0.35	0.29
Non-Residential Window Film	2022	VA	PUR-2022-00210	1.62	0.54	0.4	0.31
Non-Residential Window Film	2023	VA	EM&V Report	2.97	0.8	0.59	0.32



O.24 Virginia Non-Residential Midstream Energy Efficiency Products Program 2020–2022

O.24.1 2020–2022 Virginia Non-Residential Midstream Energy Efficiency Products Program Annual Indicator Tables

VA - Non-Residential Midstream Energy Efficiency Products Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$1,969	\$22,914	\$35,285	\$60,168
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$46,145	\$488,674	\$845,079	\$1,379,898
Costs (\$)		Planned	\$0	\$1,916,471	\$1,878,007	\$3,794,478
Costs (\$)		Variance	\$46,145	-\$1,427,798	-\$1,032,928	-\$2,414,581
		Annual % of Planned	N/A	25%	45%	36%
Participants ¹		Total (Gross)	0	7	113	120
		Planned	0	300	300	600
		Variance	0	-293	-187	-480
		Annual % of Planned (Gross)	N/A	2%	38%	20%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	65,116	1,624,787	1,689,903
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	65,116	1,624,787	1,689,903
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	-6,512	-162,479	-168,990
		Net Adjusted Savings (kWh/yr)	0	58,605	1,462,308	1,520,913
		Planned Net Savings (kWh/yr)	0	3,834,268	3,834,268	7,668,537
		Annual % Toward Planned Net Savings	N/A	1.53%	38.1%	19.8%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	9,302	14,379	14,083
		Avg. Net Savings Per Participant (kWh/yr)	N/A	8,372	12,941	12,674
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	81.4	1,957.3	2,038.7
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	81.4	1,957.3	2,038.7
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	-8.1	-195.7	-203.9
		Net Adjusted Demand Reduction (kW)	0.0	73.3	1,761.6	1,834.9
		Planned Net Savings (kW)	0.0	2,555.6	2,555.6	5,111.3
		Annual % Toward Planned Net Reduction	N/A	2.87%	68.9%	35.9%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	11.6	17.3	17.0
		Avg. Net Demand Reduction Per Participant (kW)	N/A	10.5	15.6	15.3
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	11.2	74.1	85.3
		Realization Rate Weighted by Measure	-	-	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	11.2	74.1	85.3
		Net-To-Gross Rate Weighted by Measure	-	90%	90%	90%
		Net-To-Gross Adjustment (kW)	-	-1.1	-7.4	-8.5
		Net Adjusted Demand Reduction (kW)	-	10.1	66.7	76.7
		Planned Net Savings (kW)	-	334.8	334.8	669.7
		Annual % Toward Planned Net Reduction	-	3.01%	19.9%	11.5%
		Avg. Gross Demand Reduction Per Participant (kW)	-	1.6	0.7	0.7
		Avg. Net Demand Reduction Per Participant (kW)	-	1.4	0.6	0.6
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$3,555	\$501	\$501
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0	\$0.04	\$0.04
		Cum. \$Admin. per kW (Gross)	N/A	\$306	\$30	\$30
		Cum. \$EM&V per \$Total	90.5%	30.4%	22.5%	22.5%
		Cum. \$Rebate per Participant (Gross)	N/A	\$1,380	\$3,417	\$3,417



O.24.2 2022 Virginia Non-Residential Midstream Energy Efficiency Products Program Monthly Indicator Tables

VA - Non-Residential Midstream Energy Efficiency Products Program	Indicator	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2020-2022
Category	Measure	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	Total
O&M (\$)	Direct Rebate															
O&M (\$)	Direct Implementation															
O&M (\$)	Direct EM&V															
O&M (\$)	Indirect Other (Administrative)															
Capital (\$)	Direct Implementation	\$934	\$1,440	\$1,548	\$1,927	\$4,108	\$1,611	\$1,023	\$3,780	\$4,674	\$1,751	\$10,334	\$2,454	\$35,285	\$60,168	\$0
Costs (\$)	Total	\$22,389	\$34,494	\$37,081	\$46,162	\$88,393	\$38,581	\$24,507	\$90,540	\$111,937	\$41,945	\$247,495	\$51,582	\$845,079	\$1,379,898	\$0
Costs (\$)	Planned	\$156,501	\$156,501	\$156,501	\$156,501	\$156,501	\$156,501	\$156,501	\$156,501	\$156,501	\$156,501	\$156,501	\$156,501	\$1,878,007	\$3,794,478	\$0
Costs (\$)	Variance	-\$134,131	-\$122,016	-\$119,419	-\$110,338	-\$68,108	-\$117,919	-\$131,993	-\$65,961	-\$44,563	-\$114,555	\$90,995	-\$104,918	-\$1,032,928	-\$2,414,581	\$0
	Annual % of Planned	1.2%	3.0%	5.0%	7.5%	12.7%	14.9%	16.1%	20.9%	26.8%	29.1%	42.3%	45.0%	45%	36%	\$0
Participants ¹	Total (Gross)	3	5	22	38	18	3	3	4	4	4	7	2	113	120	\$0
	Planned	25	25	25	25	25	25	25	25	25	25	25	25	300	300	\$0
	Variance	-22	-20	-3	13	-7	-22	-22	-21	-21	-21	-18	-23	-187	-480	\$0
	Annual % of Planned (Gross)	1%	3%	10%	23%	28%	30%	31%	32%	33%	35%	37%	38%	38%	20%	\$0
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	2,331	1,951	18,178	45,231	109,313	32,347	68,616	196,375	112,392	78,915	731,975	227,163	1,624,787	1,689,903	\$0
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	\$0
	Realization Rate Adjustment: (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0
	Realization Rate Adjusted Savings (kWh/yr)	2,331	1,951	18,178	45,231	109,313	32,347	68,616	196,375	112,392	78,915	731,975	227,163	1,624,787	1,689,903	\$0
	Net-To-Gross Rate Weighted by Measure	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	\$0
	Net-To-Gross Adjustment (kWh/yr)	-233	-195	-1,818	-4,523	-10,931	-3,235	-6,862	-19,637	-11,239	-7,891	-73,198	-22,716	-162,479	-168,990	\$0
	Annual Net Savings (kWh/yr)	2,097	1,756	16,360	40,708	98,382	29,112	61,754	176,737	101,153	71,023	658,778	204,447	1,462,308	1,520,913	\$0
	Planned Net Savings (kWh/yr)	319,522	319,522	319,522	319,522	319,522	319,522	319,522	319,522	319,522	319,522	319,522	319,522	3,834,268	7,668,537	\$0
	Annual % Toward Planned Net Savings	0.05%	0.10%	0.53%	1.59%	4.15%	4.91%	6.52%	11.1%	13.8%	15.6%	32.8%	38.1%	38.1%	19.8%	\$0
	Avg. Gross Savings Per Participant (kWh/yr)	777	380	826	1,190	6,073	10,782	22,872	49,094	28,098	19,729	104,568	113,581	14,379	14,083	\$0
	Avg. Net Savings Per Participant (kWh/yr)	689	351	744	1,071	5,466	9,704	20,585	44,184	25,288	17,756	94,111	102,223	12,941	12,674	\$0
Installed Summer peak kW Total	Total Gross Demand Reduction (kW)	0.3	0.3	3.0	7.7	19.3	5.6	13.8	4.0	21.8	31.4	1,838.8	11.4	1,957.3	2,038.7	\$0
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	\$0
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0
	Annual Net Savings (kW)	0.3	0.3	3.0	7.7	19.3	5.6	13.8	4.0	21.8	31.4	1,838.8	11.4	1,957.3	2,038.7	\$0
	Net-To-Gross Rate Weighted by Measure	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	\$0
	Net-To-Gross Adjustment (kW)	0.0	0.0	-0.3	-0.8	-1.9	-0.6	-1.4	-0.4	-2.2	-3.1	-183.9	-1.1	-195.7	-203.9	\$0
	Planned Net Savings (kW)	213.0	213.0	213.0	213.0	213.0	213.0	213.0	213.0	213.0	213.0	213.0	213.0	2,656.6	5,111.3	\$0
	Annual % Toward Planned Net Reduction	0.10%	0.02%	0.13%	0.40%	1.08%	1.27%	1.76%	1.90%	2.68%	3.77%	66.5%	68.9%	68.9%	35.9%	\$0
	Avg. Gross Demand Reduction Per Participant (kW)	0.10	0.05	0.14	0.20	1.11	1.9	4.6	0.99	5.4	7.9	282.7	5.7	17.3	17.0	\$0
	Avg. Net Demand Reduction Per Participant (kW)	0.09	0.05	0.1	0.2	1.0	1.7	4.1	0.9	4.9	7.1	236.4	5.1	15.6	15.3	\$0
Installed Winter peak kW Total	Total Gross Demand Reduction (kW)	0.3	0.3	3.0	7.7	3.8	5.6	13.8	11.8	4.9	13.2	7.1	2.6	74.1	85.3	\$0
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	\$0
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0
	Annual Net Savings (kW)	0.3	0.3	3.0	7.7	3.8	5.6	13.8	11.8	4.9	13.2	7.1	2.6	74.1	85.3	\$0
	Net-To-Gross Rate Weighted by Measure	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	\$0
	Net-To-Gross Adjustment (kW)	0.0	0.0	-0.3	-0.8	-0.4	-0.6	-1.4	-1.2	-0.5	-1.3	-0.7	-0.3	-7.4	-8.5	\$0
	Planned Net Savings (kW)	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	334.8	669.7	\$0
	Annual % Toward Planned Net Reduction	0.08%	0.15%	0.97%	3.04%	4.05%	5.55%	9.25%	12.4%	13.7%	17.3%	19.2%	19.9%	19.9%	11.5%	\$0
	Avg. Gross Demand Reduction Per Participant (kW)	0.1	0.05	0.1	0.2	0.2	1.9	4.6	2.9	1.2	3.3	1.0	1.3	0.7	0.7	\$0
	Avg. Net Demand Reduction Per Participant (kW)	0.09	0.05	0.1	0.2	0.2	1.7	4.1	2.7	1.1	3.0	0.9	1.2	0.6	0.6	\$0
Program Performance	Cum. Admin. per Participant (Gross)	\$2,582	\$1,817	\$779	\$410	\$375	\$380	\$379	\$401	\$429	\$430	\$492	\$501	\$501	\$501	\$0.04
	Cum. Admin. per kWh/year (Gross)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0.08	\$0.07	\$0.07	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04
	Cum. Admin. per kW (Gross)	\$316	\$333	\$339	\$331	\$311	\$310	\$285	\$305	\$292	\$253	\$29	\$30	\$30	\$30	\$30
	Cum. \$EM&V per \$Total	29.2%	26.3%	26.7%	26.4%	27.0%	27.5%	26.7%	26.8%	26.8%	27.0%	23.4%	22.5%	22.5%	22.5%	\$0
	Cum. \$Rebate per Participant (Gross)	\$974	\$661	\$309	\$181	\$902	\$868	\$879	\$1,046	\$1,097	\$1,681	\$3,239	\$3,417	\$3,417	\$3,417	\$0



O.24.3 2020–2022 Virginia Non-Residential Midstream Energy Efficiency Products Program Measure Indicator Tables

VA - Non-Residential Midstream Energy Efficiency Products Program			2020	2021	2022	2020-2022
Measures						
	Steam Cooker	Total Participants	0	2	6	8
Installed kWh/year	Steam Cooker	Total Gross Energy Savings (kWh/yr)	0	29,741	99,198	128,939
	Steam Cooker	Net Adjusted Savings (kWh/yr)	0	26,767	89,278	116,045
Installed Summer peak kW	Steam Cooker	Total Gross Demand Reduction (kW)	0.0	7.4	22.6	30.0
	Steam Cooker	Net Adjusted Demand Reduction (kW)	0.0	6.7	20.4	27.0
Installed Winter peak kW	Steam Cooker	Total Gross Demand Reduction (kW)	-	7.4	22.6	30.0
	Steam Cooker	Net Adjusted Demand Reduction (kW)	-	6.7	20.4	27.0
	Unitary AC	Total Participants	0	0	1	1
Installed kWh/year	Unitary AC	Total Gross Energy Savings (kWh/yr)	0	0	3,301	3,301
	Unitary AC	Net Adjusted Savings (kWh/yr)	0	0	2,971	2,971
Installed Summer peak kW	Unitary AC	Total Gross Demand Reduction (kW)	0.0	0.0	1.0	1.0
	Unitary AC	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.9	0.9
Installed Winter peak kW	Unitary AC	Total Gross Demand Reduction (kW)	-	-	0.0	0.0
	Unitary AC	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0
	Water-cooled Chiller	Total Participants	0	0	8	8
Installed kWh/year	Water-cooled Chiller	Total Gross Energy Savings (kWh/yr)	0	0	864,770	864,770
	Water-cooled Chiller	Net Adjusted Savings (kWh/yr)	0	0	778,293	778,293
Installed Summer peak kW	Water-cooled Chiller	Total Gross Demand Reduction (kW)	0.0	0.0	235.9	235.9
	Water-cooled Chiller	Net Adjusted Demand Reduction (kW)	0.0	0.0	212.3	212.3
Installed Winter peak kW	Water-cooled Chiller	Total Gross Demand Reduction (kW)	-	-	0.0	0.0
	Water-cooled Chiller	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0

VA - Non-Residential Midstream Energy Efficiency Products Program			2020	2021	2022	2020-2022
Measures						
	Convection Oven	Total Participants	0	1	16	17
Installed kWh/year	Convection Oven	Total Gross Energy Savings (kWh/yr)	0	1,027	18,477	19,504
	Convection Oven	Net Adjusted Savings (kWh/yr)	0	924	16,629	17,553
Installed Summer peak kW	Convection Oven	Total Gross Demand Reduction (kW)	0.0	0.4	6.3	6.7
	Convection Oven	Net Adjusted Demand Reduction (kW)	0.0	0.3	5.7	6.0
Installed Winter peak kW	Convection Oven	Total Gross Demand Reduction (kW)	-	0.4	6.3	6.7
	Convection Oven	Net Adjusted Demand Reduction (kW)	-	0.3	5.7	6.0
	Ductless Minisplit HP	Total Participants	0	0	0	0
Installed kWh/year	Ductless Minisplit HP	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Ductless Minisplit HP	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Ductless Minisplit HP	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Ductless Minisplit HP	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Ductless Minisplit HP	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Ductless Minisplit HP	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Electric Fryer	Total Participants	0	0	2	2
Installed kWh/year	Electric Fryer	Total Gross Energy Savings (kWh/yr)	0	0	4,912	4,912
	Electric Fryer	Net Adjusted Savings (kWh/yr)	0	0	4,421	4,421
Installed Summer peak kW	Electric Fryer	Total Gross Demand Reduction (kW)	0.0	0.0	1.0	1.0
	Electric Fryer	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.9	0.9
Installed Winter peak kW	Electric Fryer	Total Gross Demand Reduction (kW)	-	-	1.0	1.0
	Electric Fryer	Net Adjusted Demand Reduction (kW)	-	-	0.9	0.9
	Holding Cabinet	Total Participants	0	0	6	6
Installed kWh/year	Holding Cabinet	Total Gross Energy Savings (kWh/yr)	0	0	85,978	85,978
	Holding Cabinet	Net Adjusted Savings (kWh/yr)	0	0	77,380	77,380
Installed Summer peak kW	Holding Cabinet	Total Gross Demand Reduction (kW)	0.0	0.0	15.7	15.7
	Holding Cabinet	Net Adjusted Demand Reduction (kW)	0.0	0.0	14.1	14.1
Installed Winter peak kW	Holding Cabinet	Total Gross Demand Reduction (kW)	-	-	15.7	15.7
	Holding Cabinet	Net Adjusted Demand Reduction (kW)	-	-	14.1	14.1



VA - Non-Residential Midstream Energy Efficiency Products Program			2020	2021	2022	2020-2022
Measures						
	Air-cooled Chiller	Total Participants	0	1	1	2
Installed kWh/year	Air-cooled Chiller	Total Gross Energy Savings (kWh/yr)	0	21,139	338,533	359,672
	Air-cooled Chiller	Net Adjusted Savings (kWh/yr)	0	19,025	304,680	323,705
Installed Summer peak kW	Air-cooled Chiller	Total Gross Demand Reduction (kW)	0.0	70.2	1,646.4	1,716.6
	Air-cooled Chiller	Net Adjusted Demand Reduction (kW)	0.0	63.2	1,481.7	1,544.9
Installed Winter peak kW	Air-cooled Chiller	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Air-cooled Chiller	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Air-source Heat Pump	Total Participants	0	0	0	0
Installed kWh/year	Air-source Heat Pump	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Air-source Heat Pump	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Air-source Heat Pump	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Air-source Heat Pump	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Air-source Heat Pump	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Air-source Heat Pump	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Combination Oven	Total Participants	0	1	1	2
Installed kWh/year	Combination Oven	Total Gross Energy Savings (kWh/yr)	0	8,112	4,056	12,167
	Combination Oven	Net Adjusted Savings (kWh/yr)	0	7,300	3,650	10,951
Installed Summer peak kW	Combination Oven	Total Gross Demand Reduction (kW)	0.0	2.8	1.4	4.2
	Combination Oven	Net Adjusted Demand Reduction (kW)	0.0	2.5	1.2	3.7
Installed Winter peak kW	Combination Oven	Total Gross Demand Reduction (kW)	-	2.8	1.4	4.2
	Combination Oven	Net Adjusted Demand Reduction (kW)	-	2.5	1.2	3.7
	Commercial Freezer/Refrigerator	Total Participants	0	5	96	101
Installed kWh/year	Commercial Freezer/Refrigerator	Total Gross Energy Savings (kWh/yr)	0	5,099	205,562	210,661
	Commercial Freezer/Refrigerator	Net Adjusted Savings (kWh/yr)	0	4,589	185,006	189,595
Installed Summer peak kW	Commercial Freezer/Refrigerator	Total Gross Demand Reduction (kW)	0.0	0.7	27.0	27.7
	Commercial Freezer/Refrigerator	Net Adjusted Demand Reduction (kW)	0.0	0.6	24.3	24.9
Installed Winter peak kW	Commercial Freezer/Refrigerator	Total Gross Demand Reduction (kW)	-	0.7	27.0	27.7
	Commercial Freezer/Refrigerator	Net Adjusted Demand Reduction (kW)	-	0.6	24.3	24.9



O.24.4 2020–2022 Virginia Non-Residential Midstream Energy Efficiency Products Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CEEP	Not available	12.674	12,781	99% Not Available	Not Available	Not Available
CEEP	Not Available	12.674	12,781	99% Not Available	Not Available	Not Available

O.24.5 2020–2022 Virginia Non-Residential Midstream Energy Efficiency Products Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Midstream Energy Efficiency Products	2019	VA	PUR-2019-00201	1.02	2.49	1.12	1
Non-Residential Midstream Energy Efficiency Products	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Non-Residential Midstream Energy Efficiency Products	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Midstream Energy Efficiency Products	2022	VA	PUR-2022-00210	0.97	1.15	0.49	0.51
Non-Residential Midstream Energy Efficiency Products	2023	VA	EM&V Report	1.62	3.92	1.68	1.11



O.25 Virginia Non-Residential Multifamily Program 2020–2022

O.25.1 2020–2022 Virginia Non-Residential Multifamily Program Annual Indicator Tables

VA - Non-Residential Multifamily Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$1,213	\$9,453	\$7,265	\$17,930
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$28,431	\$201,595	\$173,987	\$404,013
Costs (\$)		Planned	\$0	\$394,826	\$504,682	\$899,508
Costs (\$)		Variance	\$28,431	-\$193,231	-\$330,695	-\$495,496
		Annual % of Planned	N/A	51%	34%	45%
Participants ¹		Total (Gross)	0	0	5	5
		Planned	0	1,100	1,725	2,825
		Variance	0	-1,100	-1,720	-2,820
		Annual % of Planned (Gross)	N/A	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	165,606	165,606
		Realization Rate Weighted by Measure	N/A	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	165,606	165,606
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	0	-16,561	-16,561
		Net Adjusted Savings (kWh/yr)	0	0	149,045	149,045
		Planned Net Savings (kWh/yr)	0	1,881,505	2,950,541	4,832,046
		Annual % Toward Planned Net Savings	N/A	0%	5.05%	3.08%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	33,121	33,121
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	29,809	29,809
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	18.2	18.2
		Realization Rate Weighted by Measure	N/A	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	18.2	18.2
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	0.0	-1.8	-1.8
		Net Adjusted Demand Reduction (kW)	0.0	0.0	16.4	16.4
		Planned Net Savings (kW)	0.0	302.9	475.0	777.8
		Annual % Toward Planned Net Reduction	N/A	0%	3.46%	2.11%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	3.6	3.6
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	3.3	3.3
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	18.3	18.3
		Realization Rate Weighted by Measure	-	-	-	100%
		Realization Rate Adjustment (kW)	-	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	18.3	18.3
		Net-To-Gross Rate Weighted by Measure	-	-	90%	90%
		Net-To-Gross Adjustment (kW)	-	-	-1.8	-1.8
		Net Adjusted Demand Reduction (kW)	-	-	16.5	16.5
		Planned Net Savings (kW)	-	-	341.6	559.4
		Annual % Toward Planned Net Reduction	-	-	4.82%	2.94%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	3.7	3.7
		Avg. Net Demand Reduction Per Participant (kW)	-	-	3.3	3.3
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	\$3,586	\$3,586
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	N/A	\$983	\$983
		Cum. \$EM&V per \$Total	94.0%	39.7%	40.1%	40.1%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	\$671	\$671



O.25.2 2022 Virginia Non-Residential Multifamily Program Monthly Indicator Tables

VA - Non-Residential Multifamily Program	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2020-2022	
Category	Measure	Indicator	Category	Measure	Indicator	Category	Measure	Indicator	Category	Measure	Indicator	Category	Measure	Indicator	Category	Measure	Indicator	Total
O&M (\$)	Direct Rebate																	
O&M (\$)	Direct Implementation																	
O&M (\$)	Direct EM&V																	
O&M (\$)	Indirect Other (Administrative)																	
Capital (\$)	Direct Implementation																	
Costs (\$)	Total																	
Costs (\$)	Planned																	
Costs (\$)	Variance																	
Annual % of Planned																		
Participants ¹	Total (Gross)																	
	Planned																	
	Variance																	
	Annual % of Planned (Gross)																	
Installed kWh/year	Total																	
	Realization Rate Weighted by Measure																	
	Realization Rate Adjusted (kWh/yr)																	
	Realization Rate Adjusted Savings (kWh/yr)																	
	Net-To-Gross Rate Weighted by Measure																	
	Net-To-Gross Adjustment (kWh/yr)																	
	Net Adjusted Savings (kWh/yr)																	
	Planned Net Savings (kWh/yr)																	
	Annual % Toward Planned Net Savings																	
	Avg. Gross Savings Per Participant (kWh/yr)																	
	Avg. Net Savings Per Participant (kWh/yr)																	
Installed Summer peak kW	Total																	
	Realization Rate Weighted by Measure																	
	Realization Rate Adjusted (kW)																	
	Realization Rate Adjusted Gross Demand Reduction (kW)																	
	Net-To-Gross Rate Weighted by Measure																	
	Net-To-Gross Adjustment (kW)																	
	Net Adjusted Demand Reduction (kW)																	
	Planned Net Savings (kW)																	
	Annual % Toward Planned Net Reduction																	
	Avg. Gross Demand Reduction Per Participant (kW)																	
	Avg. Net Demand Reduction Per Participant (kW)																	
Installed Winter peak kW	Total																	
	Realization Rate Weighted by Measure																	
	Realization Rate Adjusted (kW)																	
	Realization Rate Adjusted Gross Demand Reduction (kW)																	
	Net-To-Gross Rate Weighted by Measure																	
	Net-To-Gross Adjustment (kW)																	
	Net Adjusted Demand Reduction (kW)																	
	Planned Net Savings (kW)																	
	Annual % Toward Planned Net Reduction																	
	Avg. Gross Demand Reduction Per Participant (kW)																	
	Avg. Net Demand Reduction Per Participant (kW)																	
Program Performance	Cum. \$Admin. per Participant (Gross)																	
	Cum. \$Admin. per kWh/year (Gross)																	
	Cum. \$Admin. per kW (Gross)																	
	Cum. \$EM&V per \$1 total																	
	Cum. \$Rebate per Participant (Gross)																	



O.25.3 2020–2022 Virginia Non-Residential Multifamily Program Measure Indicator Tables

VA - Non-Residential Multifamily Program			2020	2021	2022	2020-2022
Measures						
	LED Lamps	Total Participants	0	0	5	5
Installed kWh/year	LED Lamps	Total Gross Energy Savings (kWh/yr)	0	0	165,606	165,606
	LED Lamps	Net Adjusted Savings (kWh/yr)	0	0	149,045	149,045
Installed Summer peak kW	LED Lamps	Total Gross Demand Reduction (kW)	0.0	0.0	18.2	18.2
	LED Lamps	Net Adjusted Demand Reduction (kW)	0.0	0.0	16.4	16.4
Installed Winter peak kW	LED Lamps	Total Gross Demand Reduction (kW)	-	-	18.3	18.3
	LED Lamps	Net Adjusted Demand Reduction (kW)	-	-	16.5	16.5

O.25.4 2020–2022 Virginia Non-Residential Multifamily Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CMFP	Not available	29,809	1,710	1743%	Not Available	Not Available
CMFP	Schedule 27	5,675	1,710	332%	Not Available	Not Available
CMFP	Schedule GS-1	35,843	1,710	2095%	18,532	193%

O.25.5 2020–2022 Virginia Non-Residential Multifamily Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Multifamily	2019	VA	PUR-2019-00201	3.89	3.57	2.12	0.59
Non-Residential Multifamily	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Non-Residential Multifamily	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Multifamily	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Non-Residential Multifamily	2023	VA	EM&V Report	4.76	1.77	1.39	0.41



O.26 Virginia Non-Residential New Construction Program 2020–2022

O.26.1 2020-2022 Virginia Non-Residential New Construction Program Annual Indicator Tables

VA - Non-Residential New Construction Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$1,179	\$28,316	\$19,946	\$49,441
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$27,624	\$603,899	\$477,704	\$1,109,227
Costs (\$)		Planned	\$0	\$1,139,214	\$1,153,721	\$2,292,936
Costs (\$)		Variance	\$27,624	-\$535,315	-\$676,017	-\$1,183,709
		Annual % of Planned	N/A	53%	41%	48%
Participants ¹		Total (Gross)	0	0	0	0
		Planned	0	19	47	66
		Variance	0	-19	-47	-66
		Annual % of Planned (Gross)	N/A	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0
		Planned Net Savings (kWh/yr)	0	927,828	2,295,154	3,222,983
		Annual % Toward Planned Net Savings	N/A	0%	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	247.8	612.9	860.6
		Annual % Toward Planned Net Reduction	N/A	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	0.0
		Realization Rate Weighted by Measure	-	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	-	0.0
		Net Adjusted Demand Reduction (kW)	-	-	-	0.0
		Planned Net Savings (kW)	-	-	-	972.7
		Annual % Toward Planned Net Reduction	-	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	85.1%	11.8%	8.5%	8.5%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A



O.26.2 2022 Virginia Non-Residential New Construction Program Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2020-2022 Total	
VA - Non-Residential New Construction Program	Direct Rebate																
	O&M (\$)		\$1,691	\$1,706	\$1,764	\$1,655	\$1,680	\$1,669	\$1,586	\$1,730	\$1,678	\$1,675	\$1,661	\$1,582	\$19,946	\$49,441	
	O&M (\$)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	O&M (\$)		\$37,859	\$40,853	\$42,238	\$39,645	\$39,754	\$39,977	\$37,976	\$41,428	\$40,180	\$40,109	\$39,788	\$37,897	\$477,704	\$1,109,227	
	Capital (\$)		\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143
	Costs (\$)		\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143	\$96,143
	Costs (\$)		\$56,284	\$55,290	\$53,905	\$56,498	\$56,590	\$56,106	\$56,107	\$64,716	\$55,963	\$56,034	\$56,356	\$56,247	\$56,247	\$56,247	\$56,247
	Variance		3.3%	6.8%	10.5%	13.9%	17.4%	20.8%	24.1%	27.7%	31.2%	34.7%	38.1%	41.4%	44.8%	48.2%	48.2%
	Annual % of Planned		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Participants ¹		14	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Installed kWh/year	Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Planned		14	3	3	3	3	3	3	3	3	3	3	3	3	3	
	Variance		-14	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	
	Annual % of Planned (Gross)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Total Gross Energy Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net-To-Gross Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Net-To-Gross Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Planned Net Savings (kWh/yr)		683,663	146,499	146,499	146,499	146,499	146,499	146,499	146,499	146,499	146,499	146,499	146,499	146,499	146,499	146,499	
Annual % Toward Planned Net Savings		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed Summer peak kW	Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Net-To-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Net-To-Gross Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Net Adjusted Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Planned Net Savings (kW)		182.6	39.1	39.1	39.1	39.1	39.1	39.1	39.1	39.1	39.1	39.1	39.1	39.1	39.1	39.1
	Annual % Toward Planned Net Reduction		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed Winter peak kW	Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Realization Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Realization Rate Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Realization Rate Adjusted Gross Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Net-To-Gross Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Net-To-Gross Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Net Adjusted Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Planned Net Savings (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Annual % Toward Planned Net Reduction		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Avg. Gross Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Avg. Net Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Program Performance	Cum. \$Admin. per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Cum. \$Admin. per kWh/year (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Cum. \$Admin. per kW (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Cum. \$EM&V per \$Total		11.2%	10.9%	10.8%	10.3%	10.0%	9.8%	9.4%	9.3%	9.1%	9.0%	8.8%	8.5%	8.5%	8.5%	
	Cum. \$Rebate per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



O.26.3 2020–2022 Virginia Non-Residential New Construction Program Measure Indicator Tables

VA - Non-Residential New Construction Program		2021	2022	2020-2023
Measures				
	Optimal Choice of Vertical Fenestration	0	0	3
Installed kWh/year	Optimal Choice of Vertical Fenestration	0	0	0
	Optimal Choice of Vertical Fenestration	0	0	0
Installed Summer peak kW	Optimal Choice of Vertical Fenestration	0.0	0.0	0.0
	Optimal Choice of Vertical Fenestration	0.0	0.0	0.0
Installed Winter peak kW	Optimal Choice of Vertical Fenestration	-	-	0.0
	Optimal Choice of Vertical Fenestration	-	-	0.0



VA - Non-Residential New Construction Program		2021	2022	2020-2023
Measures				
Installed kWh/year	Chiller Controls	Total Participants	0	1
	Chiller Controls	Total Gross Energy Savings (kWh/yr)	0	0
	Chiller Controls	Net Adjusted Savings (kWh/yr)	0	0
Installed Summer peak kW	Chiller Controls	Total Gross Demand Reduction (kW)	0.0	0.0
	Chiller Controls	Net Adjusted Demand Reduction (kW)	0.0	0.0
Installed Winter peak kW	Chiller Controls	Total Gross Demand Reduction (kW)	-	0.0
	Chiller Controls	Net Adjusted Demand Reduction (kW)	-	0.0
	High Efficiency DX Cooling Equipment	Total Participants	0	3
Installed kWh/year	High Efficiency DX Cooling Equipment	Total Gross Energy Savings (kWh/yr)	0	0
	High Efficiency DX Cooling Equipment	Net Adjusted Savings (kWh/yr)	0	0
Installed Summer peak kW	High Efficiency DX Cooling Equipment	Total Gross Demand Reduction (kW)	0.0	0.0
	High Efficiency DX Cooling Equipment	Net Adjusted Demand Reduction (kW)	0.0	0.0
Installed Winter peak kW	High Efficiency DX Cooling Equipment	Total Gross Demand Reduction (kW)	-	0.0
	High Efficiency DX Cooling Equipment	Net Adjusted Demand Reduction (kW)	-	0.0
	High Performance Interior Lighting	Total Participants	0	4
Installed kWh/year	High Performance Interior Lighting	Total Gross Energy Savings (kWh/yr)	0	0
	High Performance Interior Lighting	Net Adjusted Savings (kWh/yr)	0	0
Installed Summer peak kW	High Performance Interior Lighting	Total Gross Demand Reduction (kW)	0.0	0.0
	High Performance Interior Lighting	Net Adjusted Demand Reduction (kW)	0.0	0.0
Installed Winter peak kW	High Performance Interior Lighting	Total Gross Demand Reduction (kW)	-	0.0
	High Performance Interior Lighting	Net Adjusted Demand Reduction (kW)	-	0.0
Installed kWh/year	LED Exterior Lighting	Total Participants	0	3
	LED Exterior Lighting	Total Gross Energy Savings (kWh/yr)	0	0
Installed Summer peak kW	LED Exterior Lighting	Total Gross Demand Reduction (kW)	0.0	0.0
	LED Exterior Lighting	Net Adjusted Demand Reduction (kW)	0.0	0.0
Installed Winter peak kW	LED Exterior Lighting	Total Gross Demand Reduction (kW)	-	0.0
	LED Exterior Lighting	Net Adjusted Demand Reduction (kW)	-	0.0



O.26.4 2020–2022 Virginia Non-Residential New Construction Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential New Construction	2019	VA	PUR-2019-00201	2.84	1.21	1.2	0.5
Non-Residential New Construction	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Non-Residential New Construction	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential New Construction	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Non-Residential New Construction	2023	VA	EM&V Report	N/A	N/A	N/A	N/A



O.27 Virginia Non-Residential Small Business Improvement Enhanced Program (Phase VIII) 2020–2022

O.27.1 2020–2022 Virginia Non-Residential Small Business Improvement Enhanced Program (Phase VIII) Annual Indicator Tables

VA - Non-Residential Small Business Improvement Enhanced Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$2,402	\$114,584	\$143,863	\$260,849
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$56,290	\$2,443,713	\$3,445,530	\$5,945,533
Costs (\$)		Planned	\$0	\$3,564,498	\$3,652,065	\$7,216,563
Costs (\$)		Variance	\$56,290	-\$1,120,785	-\$206,535	-\$1,271,030
		Annual % of Planned	N/A	69%	94%	82%
Participants ¹		Total (Gross)	0	307	591	898
		Planned	0	634	634	1,268
		Variance	0	-327	-43	-370
		Annual % of Planned (Gross)	N/A	48%	93%	71%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	2,429,201	5,119,684	7,548,885
		Realization Rate Weighted by Measure	N/A	119%	119%	119%
		Realization Rate Adjustment (kWh/yr)	0	456,770	966,932	1,423,702
		Realization Rate Adjusted Savings (kWh/yr)	0	2,885,972	6,086,616	8,972,588
		Net-To-Gross Rate Weighted by Measure	N/A	74%	74%	74%
		Net-To-Gross Adjustment (kWh/yr)	0	-754,710	-1,596,051	-2,350,761
		Net Adjusted Savings (kWh/yr)	0	2,131,262	4,490,565	6,621,826
		Planned Net Savings (kWh/yr)	0	9,199,251	9,199,251	18,398,502
		Annual % Toward Planned Net Savings	N/A	23.2%	48.8%	36.0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	7,913	8,663	8,406
		Avg. Net Savings Per Participant (kWh/yr)	N/A	6,942	7,598	7,374
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	448.9	1,076.5	1,525.4
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	448.9	1,076.5	1,525.4
		Net-To-Gross Rate Weighted by Measure	N/A	79%	77%	78%
		Net-To-Gross Adjustment (kW)	0.0	-94.5	-243.3	-337.8
		Net Adjusted Demand Reduction (kW)	0.0	354.5	833.2	1,187.7
		Planned Net Savings (kW)	0.0	2,895.0	2,895.0	5,790.0
		Annual % Toward Planned Net Reduction	N/A	12.2%	28.8%	20.5%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	1.5	1.8	1.7
		Avg. Net Demand Reduction Per Participant (kW)	N/A	1.2	1.4	1.3
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	327.7	629.6	957.3
		Realization Rate Weighted by Measure	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	327.7	629.6	957.3
		Net-To-Gross Rate Weighted by Measure	-	77%	76%	76%
		Net-To-Gross Adjustment (kW)	-	-75.1	-151.2	-226.3
		Net Adjusted Demand Reduction (kW)	-	252.6	478.4	731.0
		Planned Net Savings (kW)	0.0	1,863.3	1,863.3	3,726.6
		Annual % Toward Planned Net Reduction	-	13.6%	25.7%	19.6%
		Avg. Gross Demand Reduction Per Participant (kW)	-	1.1	1.1	1.1
		Avg. Net Demand Reduction Per Participant (kW)	-	0.8	0.8	0.8
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$381	\$290	\$290
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.05	\$0.03	\$0.03
		Cum. \$Admin. per kW (Gross)	N/A	\$261	\$171	\$171
		Cum. \$EM&V per \$Total	83.7%	8.7%	6.6%	6.6%
		Cum. \$Rebate per Participant (Gross)	N/A	\$3,184	\$3,244	\$3,244



O.27.2 2022 Virginia Non-Residential Small Business Improvement Enhanced Program (Phase VIII) Monthly Indicator Tables

VA - Non-Residential Small Business Improvement Enhanced Program	Indicator	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2020-2022
Category	Measure	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	Total	Total
O&M (\$)	Direct Rebate																
	Direct Implementation																
O&M (\$)	Indirect EM&V																
O&M (\$)	Indirect Other (Administrative)																
Capital (\$)	Direct Implementation	\$11,669	\$12,665	\$16,643	\$11,054	\$12,374	\$10,391	\$7,868	\$11,211	\$10,200	\$3,191	\$11,951	\$14,557	\$143,863	\$0	\$0	\$260,849
Costs (\$)	Total	\$279,474	\$303,336	\$398,606	\$294,750	\$296,351	\$248,657	\$188,430	\$268,498	\$246,434	\$315,928	\$286,218	\$348,650	\$3,445,530	\$3,445,530	\$5,946,633	\$5,946,633
Costs (\$)	Planned	\$304,339	\$304,339	\$304,339	\$304,339	\$304,339	\$304,339	\$304,339	\$304,339	\$304,339	\$304,339	\$304,339	\$304,339	\$304,339	\$3,620,065	\$3,620,065	\$7,216,963
Costs (\$)	Variance	-\$24,864	-\$1,003	\$94,267	-\$39,589	-\$7,988	-\$55,462	-\$115,909	-\$35,540	-\$57,904	\$11,587	\$18,120	\$44,311	-\$206,535	-\$1,271,030	-\$1,271,030	82%
	Annual % of Planned	7.7%	16.0%	26.9%	34.1%	42.2%	49.1%	54.2%	61.6%	66.3%	77.0%	84.8%	94.3%	94%	94%	94%	82%
Participants ¹	Total (Gross)	53	60	73	51	40	35	26	25	40	63	44	81	59	59	59	886
	Planned	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	634
	Variance	-9	8	21	-1	-12	-17	-26	-27	-12	11	-8	29	-43	-43	-43	-370
	Annual % of Planned (Gross)	8%	18%	29%	37%	44%	49%	53%	57%	64%	74%	80%	93%	93%	93%	93%	71%
Installed kWh/year	Total	410,144	501,940	594,420	324,281	1,163,827	276,746	320,506	285,796	156,130	326,749	444,724	314,421	5,119,684	5,119,684	7,548,885	7,548,885
	Realization Rate Weighted by Measure	119%	120%	119%	118%	120%	119%	120%	119%	116%	118%	118%	116%	116%	116%	119%	119%
	Realization Rate Adjustment (kWh/yr)	79,119	96,022	115,416	50,534	237,816	51,765	64,588	54,182	24,816	57,183	81,908	51,584	966,932	966,932	1,423,702	1,423,702
	Realization Rate Adjusted Savings (kWh/yr)	489,265	599,962	709,835	374,815	1,401,643	328,511	385,094	339,978	180,946	383,932	526,632	366,005	6,086,616	6,086,616	8,972,988	8,972,988
	Net-To-Gross Rate Weighted by Measure	74%	73%	74%	77%	74%	73%	74%	73%	74%	75%	75%	74%	74%	74%	74%	74%
	Net-To-Gross Adjustment (kWh/yr)	-129,983	-160,604	-189,341	-87,383	-385,872	-85,631	-105,108	-89,359	-42,683	-96,067	-135,974	-88,038	-1,696,051	-1,696,051	-2,350,761	-2,350,761
	Net Adjusted Savings (kWh/yr)	359,281	439,358	520,494	287,432	1,015,771	242,880	279,986	250,619	138,252	297,865	390,659	277,967	4,490,565	4,490,565	6,621,826	6,621,826
	Planned Net Savings (kWh/yr)	899,611	754,513	754,513	754,513	754,513	754,513	754,513	754,513	754,513	754,513	754,513	754,513	9,189,251	9,189,251	18,398,502	18,398,502
	Annual % Toward Planned Net Savings	3.91%	8.66%	14.3%	17.5%	28.2%	31.1%	34.2%	36.2%	38.4%	41.5%	45.8%	48.8%	48.8%	48.8%	48.8%	36.0%
	Avg. Gross Savings Per Participant (kWh/yr)	7,739	8,366	8,143	6,356	29,096	7,907	12,327	11,432	3,963	5,186	10,107	3,862	8,663	8,406	8,406	8,406
	Avg. Net Savings Per Participant (kWh/yr)	6,779	7,323	7,130	5,636	25,394	6,939	10,769	10,025	3,456	4,569	8,879	3,432	7,598	7,598	7,598	7,598
Installed Summer peak kW	Total	90.7	86.9	128.1	52.7	284.5	45.0	54.0	62.5	33.7	84.8	69.7	83.9	1,076.5	1,076.5	1,525.4	1,525.4
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	90.7	86.9	128.1	52.7	284.5	45.0	54.0	62.5	33.7	84.8	69.7	83.9	1,076.5	1,076.5	1,525.4	1,525.4
	Net-To-Gross Rate Weighted by Measure	77%	78%	77%	84%	75%	80%	76%	77%	85%	79%	76%	82%	77%	77%	78%	78%
	Net-To-Gross Adjustment (kW)	-21.0	-19.5	-29.6	-4.5	-75.6	-8.8	-13.2	-14.3	-5.1	-17.5	-15.2	-14.9	-243.3	-243.3	-337.8	-337.8
	Net Adjusted Demand Reduction (kW)	69.7	67.4	98.4	48.1	208.9	36.1	40.8	48.2	28.7	67.3	54.5	69.0	833.2	833.2	1,187.7	1,187.7
	Planned Net Savings (kW)	283.1	237.4	237.4	237.4	237.4	237.4	237.4	237.4	237.4	237.4	237.4	237.4	2,895.0	2,895.0	5,790.0	5,790.0
	Annual % Toward Planned Net Reduction	2.41%	4.74%	8.14%	9.66%	16.9%	18.1%	19.5%	21.2%	22.2%	24.5%	26.4%	28.8%	28.8%	28.8%	20.5%	20.5%
	Avg. Gross Demand Reduction Per Participant (kW)	1.7	1.4	1.8	1.0	7.1	1.3	2.1	2.5	0.94	1.3	1.6	1.0	1.8	1.8	1.7	1.7
	Avg. Net Demand Reduction Per Participant (kW)	1.3	1.1	1.3	0.9	5.2	1.0	1.6	1.9	0.7	1.1	1.2	0.9	1.4	1.4	1.3	1.3
Installed Winter peak kW	Total	45.6	63.0	67.7	45.1	142.2	39.5	34.4	31.4	25.1	38.7	54.1	42.8	629.6	629.6	957.3	957.3
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	45.6	63.0	67.7	45.1	142.2	39.5	34.4	31.4	25.1	38.7	54.1	42.8	629.6	629.6	957.3	957.3
	Net-To-Gross Rate Weighted by Measure	76%	76%	76%	80%	73%	76%	74%	79%	81%	79%	76%	81%	76%	76%	76%	76%
	Net-To-Gross Adjustment (kW)	-10.6	-14.8	-17.4	-9.1	-36.7	-9.5	-8.8	-7.9	-4.8	-8.2	-12.9	-8.3	-151.2	-151.2	-226.3	-226.3
	Net Adjusted Demand Reduction (kW)	34.9	48.1	50.3	36.0	105.5	30.0	25.6	23.6	20.3	30.5	41.2	34.5	478.4	478.4	731.0	731.0
	Planned Net Savings (kW)	182.2	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	1,863.3	1,863.3	3,726.6	3,726.6
	Annual % Toward Planned Net Reduction	1.87%	4.45%	7.15%	9.09%	14.6%	16.3%	17.6%	19.5%	20.0%	21.6%	23.8%	25.7%	25.7%	25.7%	19.6%	19.6%
	Avg. Gross Demand Reduction Per Participant (kW)	0.9	1.0	0.9	0.7	3.6	1.1	1.3	1.3	0.6	0.6	0.6	0.5	1.1	1.1	1.1	1.1
	Avg. Net Demand Reduction Per Participant (kW)	0.7	0.8	0.7	0.6	2.6	0.9	1.0	0.9	0.5	0.5	0.5	0.4	0.8	0.8	0.8	0.8
Program Performance	Cum. \$Admin. per Participant (Gross)	\$357	\$336	\$320	\$311	\$311	\$310	\$310	\$315	\$311	\$311	\$301	\$290	\$290	\$290	\$290	\$290
	Cum. \$Admin. per kWh/year (Gross)	\$0.05	\$0.04	\$0.04	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03
	Cum. \$Admin. per kW (Gross)	\$238	\$226	\$209	\$209	\$166	\$168	\$168	\$168	\$168	\$168	\$171	\$171	\$171	\$171	\$171	\$171
	Cum. \$EM&V per \$ Total	7.8%	7.3%	7.3%	6.6%	6.6%	6.6%	6.3%	6.7%	6.6%	6.6%	6.8%	6.6%	6.6%	6.6%	6.6%	6.6%
	Cum. \$Rebate per Participant (Gross)	\$3,190	\$3,168	\$3,235	\$3,195	\$3,266	\$3,281	\$3,283	\$3,349	\$3,344	\$3,287	\$3,287	\$3,244	\$3,244	\$3,244	\$3,244	\$3,244



O.27.3 2020–2022 Virginia Non-Residential Small Business Improvement Enhanced Program (Phase VIII) Measure Indicator Tables

VA - Non-Residential Small Business Improvement Enhanced Program			2020	2021	2022	2020-2022
Measures						
	Occupancy Sensors	Total Participants	0	15	22	37
Installed kWh/year	Occupancy Sensors	Total Gross Energy Savings (kWh/yr)	0	42,594	53,819	96,412
	Occupancy Sensors	Net Adjusted Savings (kWh/yr)	0	39,612	50,051	89,663
Installed Summer peak kW	Occupancy Sensors	Total Gross Demand Reduction (kW)	0.0	5.8	5.5	11.3
	Occupancy Sensors	Net Adjusted Demand Reduction (kW)	0.0	5.4	5.1	10.5
Installed Winter peak kW	Occupancy Sensors	Total Gross Demand Reduction (kW)	-	2.3	2.5	4.8
	Occupancy Sensors	Net Adjusted Demand Reduction (kW)	-	2.1	2.3	4.5
	Strip Curtains	Total Participants	0	0	13	13
Installed kWh/year	Strip Curtains	Total Gross Energy Savings (kWh/yr)	0	0	71,912	71,912
	Strip Curtains	Net Adjusted Savings (kWh/yr)	0	0	66,878	66,878
Installed Summer peak kW	Strip Curtains	Total Gross Demand Reduction (kW)	0.0	0.0	8.2	8.2
	Strip Curtains	Net Adjusted Demand Reduction (kW)	0.0	0.0	7.6	7.6
Installed Winter peak kW	Strip Curtains	Total Gross Demand Reduction (kW)	-	-	8.2	8.2
	Strip Curtains	Net Adjusted Demand Reduction (kW)	-	-	7.6	7.6
	T5/T8 Lamps	Total Participants	0	0	1	1
Installed kWh/year	T5/T8 Lamps	Total Gross Energy Savings (kWh/yr)	0	0	5,568	5,568
	T5/T8 Lamps	Net Adjusted Savings (kWh/yr)	0	0	5,178	5,178
Installed Summer peak kW	T5/T8 Lamps	Total Gross Demand Reduction (kW)	0.0	0.0	1.3	1.3
	T5/T8 Lamps	Net Adjusted Demand Reduction (kW)	0.0	0.0	1.2	1.2
Installed Winter peak kW	T5/T8 Lamps	Total Gross Demand Reduction (kW)	-	-	0.3	0.3
	T5/T8 Lamps	Net Adjusted Demand Reduction (kW)	-	-	0.3	0.3
	Window Film	Total Participants	0	2	0	2
Installed kWh/year	Window Film	Total Gross Energy Savings (kWh/yr)	0	883	0	883
	Window Film	Net Adjusted Savings (kWh/yr)	0	821	0	821
Installed Summer peak kW	Window Film	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Window Film	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Window Film	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Window Film	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0



VA - Non-Residential Small Business Improvement Enhanced Program			2020	2021	2022	2020-2022
Measures						
	Auto Closers	Total Participants	0	0	12	12
Installed kWh/year	Auto Closers	Total Gross Energy Savings (kWh/yr)	0	0	2,223	2,223
	Auto Closers	Net Adjusted Savings (kWh/yr)	0	0	2,068	2,068
Installed Summer peak kW	Auto Closers	Total Gross Demand Reduction (kW)	0.0	0.0	0.3	0.3
	Auto Closers	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.2	0.2
Installed Winter peak kW	Auto Closers	Total Gross Demand Reduction (kW)	-	-	0.3	0.3
	Auto Closers	Net Adjusted Demand Reduction (kW)	-	-	0.2	0.2
	Duct Test and Seal	Total Participants	0	183	336	519
Installed kWh/year	Duct Test and Seal	Total Gross Energy Savings (kWh/yr)	0	118,768	173,190	291,958
	Duct Test and Seal	Net Adjusted Savings (kWh/yr)	0	110,455	161,066	271,521
Installed Summer peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	0.0	69.7	111.3	181.0
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	0.0	64.8	103.5	168.3
Installed Winter peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	-	54.3	67.8	122.1
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	-	50.5	63.1	113.6
	HVAC Tune up	Total Participants	0	225	480	705
Installed kWh/year	HVAC Tune up	Total Gross Energy Savings (kWh/yr)	0	91,859	208,534	300,394
	HVAC Tune up	Net Adjusted Savings (kWh/yr)	0	85,429	193,937	279,366
Installed Summer peak kW	HVAC Tune up	Total Gross Demand Reduction (kW)	0.0	73.2	150.2	223.4
	HVAC Tune up	Net Adjusted Demand Reduction (kW)	0.0	68.0	139.7	207.8
Installed Winter peak kW	HVAC Tune up	Total Gross Demand Reduction (kW)	-	22.8	40.4	63.2
	HVAC Tune up	Net Adjusted Demand Reduction (kW)	-	21.2	37.6	58.8
	LED Lamps	Total Participants	0	87	133	220
Installed kWh/year	LED Lamps	Total Gross Energy Savings (kWh/yr)	0	2,175,097	4,604,439	6,779,536
	LED Lamps	Net Adjusted Savings (kWh/yr)	0	1,894,944	4,011,387	5,906,332
Installed Summer peak kW	LED Lamps	Total Gross Demand Reduction (kW)	0.0	300.3	799.7	1,100.0
	LED Lamps	Net Adjusted Demand Reduction (kW)	0.0	216.2	575.8	792.0
Installed Winter peak kW	LED Lamps	Total Gross Demand Reduction (kW)	-	248.3	510.1	758.4
	LED Lamps	Net Adjusted Demand Reduction (kW)	-	178.8	367.3	546.0



O.27.4 2020–2022 Virginia Non-Residential Small Business Improvement Enhanced Program (Phase VIII)
Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
SB12	Not available	7373.971588	469	1572%	Not Available	Not Available
SB12	Schedule GS-1	4494.55282	469	958%	18,532	24%
SB12	Schedule GS-2	13281.10484	469	2830%	307,328	4%
SB12	Schedule GS-2T	19621.47643	469	4182%	463,397	4%
SB12	Schedule 5	14317.50989	469	3051%	50,702	28%
SB12	Schedule 5P	951.204406	469	203%	225,550	0%
SB12	Schedule 5C	7251.033178	469	1545%	56,617	13%

O.27.5 2020–2022 Virginia Non-Residential Small Business Improvement Enhanced Program (Phase VIII)
Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Small Business Improvement Enhanced	2019	VA	PUR-2019-00201	2.41	1.68	1.34	0.63
Non-Residential Small Business Improvement Enhanced	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Non-Residential Small Business Improvement Enhanced	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Small Business Improvement Enhanced	2022	VA	PUR-2022-00210	2.19	0.93	0.7	0.4
Non-Residential Small Business Improvement Enhanced	2023	VA	EM&V Report	2.62	0.76	0.6	0.29



O.28 Virginia Non-Residential Agriculture Program 2021-2022

O.28.1 2021-2022 Virginia Non-Residential Agriculture Program Annual Indicator Tables

VA - Non-Residential Agricultural Energy Efficiency Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$974	\$19,669	\$20,643
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$20,770	\$471,081	\$491,851
Costs (\$)		Planned	\$0	\$909,217	\$909,217
Costs (\$)		Variance	\$20,770	-\$438,137	-\$417,367
		Annual % of Planned	N/A	52%	54%
Participants ¹		Total (Gross)	0	3	3
		Planned	0	151	151
		Variance	0	-148	-148
		Annual % of Planned (Gross)	N/A	2%	2%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	4,980,594	4,980,594
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	4,980,594	4,980,594
		Net-To-Gross Rate Weighted by Measure	N/A	97%	97%
		Net-To-Gross Adjustment (kWh/yr)	0	-149,418	-149,418
		Net Adjusted Savings (kWh/yr)	0	4,831,176	4,831,176
		Planned Net Savings (kWh/yr)	0	1,872,912	1,872,912
		Annual % Toward Planned Net Savings	N/A	257.9%	257.9%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	1,660,198	1,660,198
		Avg. Net Savings Per Participant (kWh/yr)	N/A	1,610,392	1,610,392
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	793.3	793.3
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	793.3	793.3
		Net-To-Gross Rate Weighted by Measure	N/A	97%	97%
		Net-To-Gross Adjustment (kW)	0.0	-23.8	-23.8
		Net Adjusted Demand Reduction (kW)	0.0	769.5	769.5
		Planned Net Savings (kW)	0.0	244.7	244.7
		Annual % Toward Planned Net Reduction	N/A	314.4%	314.4%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	264.4	264.4
		Avg. Net Demand Reduction Per Participant (kW)	N/A	256.5	256.5
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	0.0	0.0
		Realization Rate Weighted by Measure	-	-	N/A
		Realization Rate Adjustment (kW)	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	0.0	0.0
		Planned Net Savings (kW)	-	498.9	498.9
		Annual % Toward Planned Net Reduction	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$6,881	\$6,881
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.00	\$0.00
		Cum. \$Admin. per kW (Gross)	N/A	\$26	\$26
		Cum. \$EM&V per \$Total	74.6%	18.5%	18.5%
		Cum. \$Rebate per Participant (Gross)	N/A	\$16,668	\$16,668



O.28.2 2022 Virginia Non-Residential Agriculture Program Monthly Indicator Tables

VA - Non-Residential Agricultural Energy Efficiency Program	Measure	Indicator	2022												Total
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
O&M (\$)	Direct Rebate		\$76	\$871	\$325	\$83	\$6,487	\$1,422	\$1,067	\$2,044	\$1,631	\$2,965	\$1,071	\$19,669	\$20,643
O&M (\$)	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	Direct EM&V		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital (\$)	Indirect Other (Administrative)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital (\$)	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total		\$1,828	\$20,858	\$7,786	\$1,990	\$155,353	\$34,051	\$25,565	\$48,944	\$36,975	\$39,070	\$25,641	\$471,081	\$491,851
Costs (\$)	Planned		\$75,768	\$75,768	\$75,768	\$75,768	\$75,768	\$75,768	\$75,768	\$75,768	\$75,768	\$75,768	\$75,768	\$75,768	\$909,217
Costs (\$)	Variance		-\$73,940	-\$54,910	-\$67,983	-\$73,778	\$79,585	-\$41,717	-\$50,203	-\$26,824	-\$36,793	-\$36,698	-\$4,750	-\$50,127	-\$438,137
Annual % of Planned			0.2%	2.5%	3.4%	3.6%	20.7%	24.4%	27.2%	32.6%	36.9%	41.2%	49.0%	51.8%	54%
Participants*	Total (Gross)		0	0	0	0	0	0	0	0	0	1	1	0	3
Participants*	Planned		19	12	12	12	12	12	12	12	12	12	12	12	151
Participants*	Variance		-19	-12	-12	-12	-12	-12	-12	-12	-12	-11	-11	-12	-148
Participants*	Annual % of Planned (Gross)		0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	2%	2%
Installed kWh/year	Total		0	0	0	0	0	0	0	0	0	0	0	0	4,980,594
Installed kWh/year	Total Gross Energy Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	4,980,594
Installed kWh/year	Realization Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%
Installed kWh/year	Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0
Installed kWh/year	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0
Installed kWh/year	Net-T-o-Gross Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	97%
Installed kWh/year	Net-T-o-Gross Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0
Installed kWh/year	Net Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0
Installed kWh/year	Planned Net Savings (kWh/yr)		235,684	148,841	148,841	148,841	148,841	148,841	148,841	148,841	148,841	148,841	148,841	148,841	1,872,912
Installed kWh/year	Annual % Toward Planned Net Savings		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	257.9%
Installed kWh/year	Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,660,198
Installed kWh/year	Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,610,392
Installed Summer peak kW	Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	793.3
Installed Summer peak kW	Total Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	793.3
Installed Summer peak kW	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Installed Summer peak kW	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Summer peak kW	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Summer peak kW	Net-T-o-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	97%
Installed Summer peak kW	Net-T-o-Gross Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Summer peak kW	Net Adjusted Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Summer peak kW	Planned Net Savings (kW)		30.8	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	244.7
Installed Summer peak kW	Annual % Toward Planned Net Reduction		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	314.4%
Installed Summer peak kW	Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	284.4
Installed Summer peak kW	Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	266.5
Installed Winter peak kW	Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Total Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Realization Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	N/A
Installed Winter peak kW	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Net-T-o-Gross Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	N/A
Installed Winter peak kW	Net-T-o-Gross Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Net Adjusted Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Planned Net Savings (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Annual % Toward Planned Net Reduction		-	-	-	-	-	-	-	-	-	-	-	-	0%
Installed Winter peak kW	Avg. Gross Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-
Installed Winter peak kW	Avg. Net Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-
Program Performance	Cum. \$Admin. per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$13,349	\$14,976	\$6,524	\$6,881
Program Performance	Cum. \$Admin. per kWh/yr (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$0	\$0.08	\$0.00	\$0.00
Program Performance	Cum. \$Admin. per kW (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$658	\$481	\$25	\$26
Program Performance	Cum. \$EM&V per \$ Total		68.6%	79.2%	79.8%	79.8%	79.8%	79.8%	79.8%	79.8%	79.8%	79.8%	79.8%	79.8%	79.8%
Program Performance	Cum. \$Rebate per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$12,240	\$5,187	\$16,668	\$16,668



O.28.3 2021-2022 Virginia Non-Residential Agriculture Program Measure Indicator Tables

VA - Non-Residential Agricultural Energy Efficiency Program			2021	2022	2021-2022
Measures					
	Dairy Lighting Controls	Total Participants	0	0	0
Installed kWh/year	Dairy Lighting Controls	Total Gross Energy Savings (kWh/yr)	0	0	0
	Dairy Lighting Controls	Net Adjusted Savings (kWh/yr)	0	0	0
Installed Summer peak kW	Dairy Lighting Controls	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Dairy Lighting Controls	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Dairy Lighting Controls	Total Gross Demand Reduction (kW)	-	-	0.0
	Dairy Lighting Controls	Net Adjusted Demand Reduction (kW)	-	-	0.0
	Horticulture LED	Total Participants	0	3	3
Installed kWh/year	Horticulture LED	Total Gross Energy Savings (kWh/yr)	0	4,980,594	4,980,594
	Horticulture LED	Net Adjusted Savings (kWh/yr)	0	4,831,176	4,831,176
Installed Summer peak kW	Horticulture LED	Total Gross Demand Reduction (kW)	0.0	793.3	793.3
	Horticulture LED	Net Adjusted Demand Reduction (kW)	0.0	769.5	769.5
Installed Winter peak kW	Horticulture LED	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Horticulture LED	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Ventilation Fan	Total Participants	0	0	0
Installed kWh/year	Ventilation Fan	Total Gross Energy Savings (kWh/yr)	0	0	0
	Ventilation Fan	Net Adjusted Savings (kWh/yr)	0	0	0
Installed Summer peak kW	Ventilation Fan	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Ventilation Fan	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Ventilation Fan	Total Gross Demand Reduction (kW)	-	-	0.0
	Ventilation Fan	Net Adjusted Demand Reduction (kW)	-	-	0.0

O.28.4 2021-2022 Virginia Non-Residential Agriculture Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CAGR	Not available	1,610,392	12,403	12983%	Not Available	Not Available
CAGR	Schedule GS-2	2,413,040	12,403	19455%	307,328	785%
CAGR	Schedule GS-1	5,096	12,403	41%	18,532	27%

O.28.5 2021-2022 Virginia Non-Residential Agriculture Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Agricultural Energy Efficiency	2020	VA	PUR-2020-00274	3.13	1.61	1.3	0.63
Non-Residential Agricultural Energy Efficiency	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Agricultural Energy Efficiency	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Non-Residential Agricultural Energy Efficiency	2023	VA	EM&V Report	1.1	0.21	0.16	0.15



O.29 Virginia Non-Residential Office Program 2019–2022

O.29.1 2019–2022 Virginia Non-Residential Office Program Annual Indicator Tables

VA - Non-Residential Office Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$13,706	\$21,271	\$37,706	\$19,957	\$92,641
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$405,507	\$408,837	\$804,161	\$477,980	\$2,096,486
Costs (\$)		Planned	\$832,726	\$1,140,867	\$1,141,410	\$1,165,496	\$4,280,498
Costs (\$)		Variance	-\$427,218	-\$732,030	-\$337,249	-\$687,516	-\$2,184,013
		Annual % of Planned	49%	36%	70%	41%	49%
Participants ¹		Total (Gross)	0	6	59	16	81
		Planned	42	79	79	79	279
		Variance	-42	-73	-20	-63	-198
		Annual % of Planned (Gross)	0%	8%	75%	20%	29%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	131,417	1,203,577	4,217,101	5,552,095
		Realization Rate Weighted by Measure	N/A	100%	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	131,417	1,203,577	4,217,101	5,552,095
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	-13,142	-120,358	-421,710	-555,209
		Net Adjusted Savings (kWh/yr)	0	118,275	1,083,219	3,795,391	4,996,885
		Planned Net Savings (kWh/yr)	2,460,940	4,628,911	4,628,911	4,628,911	16,347,675
		Annual % Toward Planned Net Savings	0%	2.56%	23.4%	82.0%	30.6%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	21,903	20,400	263,569	68,544
		Avg. Net Savings Per Participant (kWh/yr)	N/A	19,713	18,360	237,212	61,690
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	68.6	68.6
		Realization Rate Weighted by Measure	N/A	N/A	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	68.6	68.6
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	-6.9	-6.9
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	61.7	61.7
		Planned Net Savings (kW)	248.3	467.0	467.0	467.0	1,649.4
		Annual % Toward Planned Net Reduction	0%	0%	0%	13.2%	3.74%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.0	0.0	4.3	0.8
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.0	0.0	3.9	0.8
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	0.0	41.1	41.1
		Realization Rate Weighted by Measure	-	-	N/A	100%	100%
		Realization Rate Adjustment (kW)	-	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	0.0	41.1	41.1
		Net-To-Gross Rate Weighted by Measure	-	-	N/A	90%	90%
		Net-To-Gross Adjustment (kW)	-	-	0.0	-4.1	-4.1
		Net Adjusted Demand Reduction (kW)	-	-	0.0	37.0	37.0
		Planned Net Savings (kW)	0.0	0.0	2,457.5	2,457.5	4,915.0
		Annual % Toward Planned Net Reduction	-	-	0%	1.50%	0.75%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	0.0	4.6	0.6
		Avg. Net Demand Reduction Per Participant (kW)	-	-	0.0	4.1	0.5
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$5,829	\$1,118	\$1,144	\$1,144
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0	\$0.05	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	\$1,351	\$1,351
		Cum. \$EM&V per \$Total	25.8%	30.9%	24.3%	24.2%	24.2%
		Cum. \$Rebate per Participant (Gross)	N/A	\$2,944	\$3,921	\$4,611	\$4,611



O.29.2 2022 Virginia Non-Residential Office Program Monthly Indicator Tables

VA - Non-Residential Office Program	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2019-2022 Total
	Category	Indicator														
	O&M (\$)	Direct Rebate	\$656	\$1,409	\$884	\$860	\$1,954	\$1,329	\$613	\$2,402	\$1,820	\$2,836	\$1,818	\$3,377	\$19,957	\$92,641
	O&M (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	O&M (\$)	Direct EM&V	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	O&M (\$)	Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Capital (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Costs (\$)	Total	\$15,689	\$33,757	\$21,170	\$20,602	\$46,789	\$31,833	\$14,677	\$57,531	\$43,582	\$87,920	\$43,534	\$80,885	\$477,980	\$2,096,486
	Costs (\$)	Planned	\$97,125	\$97,125	\$97,125	\$97,125	\$97,125	\$97,125	\$97,125	\$97,125	\$97,125	\$97,125	\$97,125	\$97,125	\$97,125	\$4,280,498
	Costs (\$)	Variance	-\$81,425	-\$63,367	-\$75,955	-\$76,523	-\$50,336	-\$65,292	-\$82,447	-\$39,593	-\$53,542	-\$29,205	-\$53,591	-\$16,240	-\$687,516	-\$2,184,013
		Annual % of Planned	1.3%	4.2%	6.1%	7.9%	11.8%	14.6%	15.6%	20.8%	24.5%	30.3%	34.1%	41.0%	41%	49%
	Participants ¹	Total (Gross)	0	1	0	0	2	0	0	2	1	5	2	3	16	81
		Planned	13	6	6	6	6	6	6	6	6	6	6	6	6	79
		Variance	-13	-5	-6	-6	-4	-4	-6	-4	-5	-1	-4	-3	-63	-198
		Annual % of Planned (Gross)	0%	1%	1%	1%	4%	4%	4%	6%	8%	14%	16%	20%	20%	29%
	Installed kWh/year	Total	0	135,230	0	0	143,769	0	0	198,983	228,922	377,579	125,047	3,007,571	4,217,101	5,552,095
		Realization Rate Weighted by Measure	N/A	100%	N/A	100%	N/A	100%	100%	100%	100%	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	135,230	0	0	143,769	0	0	198,983	228,922	377,579	125,047	3,007,571	4,217,101	5,552,095
		Net-To-Gross Rate Weighted by Measure	N/A	90%	N/A	N/A	90%	N/A	90%	90%	90%	90%	90%	90%	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	-13,523	0	0	-14,377	0	0	-19,898	-22,892	-37,758	-12,505	-300,757	-421,710	-552,095
		Planned Net Savings (kWh/yr)	761,720	351,563	351,563	351,563	351,563	351,563	351,563	351,563	351,563	351,563	351,563	351,563	351,563	4,996,885
		Annual % Toward Planned Net Savings	0%	2.63%	2.63%	2.63%	5.42%	5.42%	5.42%	9.29%	13.7%	21.1%	23.5%	82.0%	82.0%	30.6%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	135,230	N/A	N/A	71,885	N/A	N/A	99,491	228,922	75,516	62,524	1,002,524	263,569	68,544
		Avg. Net Savings Per Participant (kWh/yr)	N/A	121,707	N/A	N/A	64,696	N/A	N/A	89,542	206,030	67,964	56,271	902,271	237,212	61,690
	Installed Summer peak kW	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	64.0	68.6	68.6
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	64.0	68.6	68.6
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	0.0	-6.4	-6.9	-6.9
		Planned Net Savings (kW)	76.9	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	467.0
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0.87%	0.87%	0.87%	0.87%	13.2%	13.2%	3.74%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.0	N/A	N/A	0.0	N/A	N/A	2.3	0.0	0.0	0.0	21.3	4.3	0.8
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.0	N/A	N/A	0.0	N/A	N/A	2.0	0.0	0.0	0.0	19.2	3.9	0.8
	Installed Winter peak kW	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	37.8	41.1	41.1
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	37.8	41.1	41.1
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	0.0	0.0	0.0	-3.8	-4.1	-4.1
		Planned Net Savings (kW)	404.4	186.6	186.6	186.6	186.6	186.6	186.6	186.6	186.6	186.6	186.6	186.6	186.6	37.0
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0.12%	0.12%	0.12%	0.12%	1.50%	1.50%	0.75%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	0.0	N/A	N/A	1.7	N/A	N/A	0.0	12.6	4.6	0.6
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	0.0	N/A	N/A	1.5	N/A	N/A	0.0	11.3	4.1	0.5
	Program Performance	Cum. \$Admin. per Participant (Gross)	\$1,128	\$1,133	\$1,146	\$1,159	\$1,154	\$1,173	\$1,182	\$1,183	\$1,192	\$1,151	\$1,144	\$1,144	\$1,144	\$1,144
		Cum. \$Admin. per kWh/yr (Gross)	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.04	\$0.04	\$0.04	\$0.04	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$16,293	\$18,695	\$19,322	\$19,724	\$1,351	\$1,351	\$1,351
		Cum. \$EM&V per \$Total	24.1%	24.1%	24.1%	24.1%	24.6%	24.9%	24.7%	25.6%	25.3%	25.2%	25.2%	24.2%	24.2%	24.2%
		Cum. \$Rebate per Participant (Gross)	\$3,921	\$3,947	\$3,947	\$3,947	\$3,947	\$3,947	\$3,947	\$3,995	\$4,101	\$4,175	\$4,191	\$4,611	\$4,611	\$4,611



O.29.3 2019–2022 Virginia Non-Residential Office Program Measure Indicator Tables

VA - Non-Residential Office Program			2019	2020	2021	2022	2019-2022
Measures							
	Schedule HVAC (electric heat)	Total Participants	0	0	2	11	13
Installed kWh/year	Schedule HVAC (electric heat)	Total Gross Energy Savings (kWh/yr)	0	0	512	1,703,430	1,703,942
	Schedule HVAC (electric heat)	Net Adjusted Savings (kWh/yr)	0	0	461	1,533,087	1,533,547
Installed Summer peak kW	Schedule HVAC (electric heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Schedule HVAC (electric heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Schedule HVAC (electric heat)	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
	Schedule HVAC (electric heat)	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0
	Schedule HVAC (gas heat)	Total Participants	0	6	57	8	71
Installed kWh/year	Schedule HVAC (gas heat)	Total Gross Energy Savings (kWh/yr)	0	37,218	333,424	468,872	839,514
	Schedule HVAC (gas heat)	Net Adjusted Savings (kWh/yr)	0	33,497	300,082	421,985	755,563
Installed Summer peak kW	Schedule HVAC (gas heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Schedule HVAC (gas heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Schedule HVAC (gas heat)	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
	Schedule HVAC (gas heat)	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0
	Schedule Lighting	Total Participants	0	0	0	3	3
Installed kWh/year	Schedule Lighting	Total Gross Energy Savings (kWh/yr)	0	0	0	1,351,310	1,351,310
	Schedule Lighting	Net Adjusted Savings (kWh/yr)	0	0	0	1,216,179	1,216,179
Installed Summer peak kW	Schedule Lighting	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Schedule Lighting	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Schedule Lighting	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
	Schedule Lighting	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0
	Static Pressure Reset	Total Participants	0	0	0	3	3
Installed kWh/year	Static Pressure Reset	Total Gross Energy Savings (kWh/yr)	0	0	0	222,378	222,378
	Static Pressure Reset	Net Adjusted Savings (kWh/yr)	0	0	0	200,141	200,141
Installed Summer peak kW	Static Pressure Reset	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	68.6	68.6
	Static Pressure Reset	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	61.7	61.7
Installed Winter peak kW	Static Pressure Reset	Total Gross Demand Reduction (kW)	-	-	-	41.1	41.1
	Static Pressure Reset	Net Adjusted Demand Reduction (kW)	-	-	-	37.0	37.0



VA - Non-Residential Office Program			2019	2020	2021	2022	2019-2022
Measures							
	Discharge Air Temperature Reset (electric heat)	Total Participants	0	0	0	3	3
Installed kWh/year	Discharge Air Temperature Reset (electric heat)	Total Gross Energy Savings (kWh/yr)	0	0	0	243,117	243,117
	Discharge Air Temperature Reset (electric heat)	Net Adjusted Savings (kWh/yr)	0	0	0	218,806	218,806
Installed Summer peak kW	Discharge Air Temperature Reset (electric heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Discharge Air Temperature Reset (electric heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Discharge Air Temperature Reset (electric heat)	Total Gross Demand Reduction (kW)	-	-	-	0.0	0.0
	Discharge Air Temperature Reset (electric heat)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0	0.0
	Dual Enthalpy Economizer Control	Total Participants	0	0	0	2	2
Installed kWh/year	Dual Enthalpy Economizer Control	Total Gross Energy Savings (kWh/yr)	0	0	0	5,668	5,668
	Dual Enthalpy Economizer Control	Net Adjusted Savings (kWh/yr)	0	0	0	5,101	5,101
Installed Summer peak kW	Dual Enthalpy Economizer Control	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Dual Enthalpy Economizer Control	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Dual Enthalpy Economizer Control	Total Gross Demand Reduction (kW)	-	-	-	0.0	0.0
	Dual Enthalpy Economizer Control	Net Adjusted Demand Reduction (kW)	-	-	-	0.0	0.0
	Night Temperature Setback	Total Participants	0	6	59	4	69
Installed kWh/year	Night Temperature Setback	Total Gross Energy Savings (kWh/yr)	0	94,198	869,641	199,095	1,162,935
	Night Temperature Setback	Net Adjusted Savings (kWh/yr)	0	84,779	782,677	179,185	1,046,641
Installed Summer peak kW	Night Temperature Setback	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Night Temperature Setback	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Night Temperature Setback	Total Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
	Night Temperature Setback	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0	0.0
	Reduce VAV Box Minimum Position (electric heat)	Total Participants	0	0	0	2	2
Installed kWh/year	Reduce VAV Box Minimum Position (electric heat)	Total Gross Energy Savings (kWh/yr)	0	0	0	23,230	23,230
	Reduce VAV Box Minimum Position (electric heat)	Net Adjusted Savings (kWh/yr)	0	0	0	20,907	20,907
Installed Summer peak kW	Reduce VAV Box Minimum Position (electric heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Reduce VAV Box Minimum Position (electric heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Reduce VAV Box Minimum Position (electric heat)	Total Gross Demand Reduction (kW)	-	-	-	0.0	0.0
	Reduce VAV Box Minimum Position (electric heat)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0	0.0



O.29.4 2019–2022 Virginia Non-Residential Office Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CTSO	Not available	61689.94156	58,594	105% Not Available	Not Available	Not Available
CTSO	Schedule GS-2T	21807.08712	58,594	37%	463,397	5%
CTSO	Schedule GS-2	270307.9494	58,594	461%	307,328	88%

O.29.5 2019–2022 Virginia Non-Residential Office Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Office	2018	VA	PUR-2018-00168	4.62	1.08	1.14	0.41
Non-Residential Office	2019	VA	PUR-2019-00201	N/A	N/A	N/A	N/A
Non-Residential Office	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Non-Residential Office	2021	VA	PUR-2021-00247	2.6	0.2	0.21	0.12
Non-Residential Office	2022	VA	PUR-2022-00210	2.96	0.32	0.34	0.18
Non-Residential Office	2023	VA	EM&V Report	10.55	1.46	1.56	0.3



O.30 Virginia Non-Residential Building Optimization Program 2021-2022

O.30.1 2021-2022 Virginia Non-Residential Building Optimization Program Annual Indicator Tables

VA - Non-Residential Building Optimization Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$328	\$21,019	\$21,347
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$6,996	\$503,402	\$510,398
Costs (\$)		Planned	\$0	\$1,100,849	\$1,100,849
Costs (\$)		Variance	\$6,996	-\$597,447	-\$590,451
		Annual % of Planned	N/A	46%	46%
Participants ¹		Total (Gross)	0	2	2
		Planned	0	28	28
		Variance	0	-26	-26
		Annual % of Planned (Gross)	N/A	7%	7%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	1,797,882	1,797,882
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	1,797,882	1,797,882
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%
		Net-To-Gross Adjustment (kWh/yr)	0	-179,788	-179,788
		Net Adjusted Savings (kWh/yr)	0	1,618,094	1,618,094
		Planned Net Savings (kWh/yr)	0	4,608,702	4,608,702
		Annual % Toward Planned Net Savings	N/A	35.1%	35.1%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	898,941	898,941
		Avg. Net Savings Per Participant (kWh/yr)	N/A	809,047	809,047
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	47.2	47.2
		Realization Rate Weighted by Measure	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	47.2	47.2
		Net-To-Gross Rate Weighted by Measure	N/A	90%	90%
		Net-To-Gross Adjustment (kW)	0.0	-4.7	-4.7
		Net Adjusted Demand Reduction (kW)	0.0	42.4	42.4
		Planned Net Savings (kW)	0.0	465.0	465.0
		Annual % Toward Planned Net Reduction	N/A	9.13%	9.13%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	23.6	23.6
		Avg. Net Demand Reduction Per Participant (kW)	N/A	21.2	21.2
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	11.7	11.7
		Realization Rate Weighted by Measure	-	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	11.7	11.7
		Net-To-Gross Rate Weighted by Measure	-	90%	90%
		Net-To-Gross Adjustment (kW)	-	-1.2	-1.2
		Net Adjusted Demand Reduction (kW)	-	10.5	10.5
		Planned Net Savings (kW)	0.0	2,446.8	2,446.8
		Annual % Toward Planned Net Reduction	-	0.43%	0.43%
		Avg. Gross Demand Reduction Per Participant (kW)	-	5.8	5.8
		Avg. Net Demand Reduction Per Participant (kW)	-	5.3	5.3
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$10,673	\$10,673
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.01	\$0.01
		Cum. \$Admin. per kW (Gross)	N/A	\$453	\$453
		Cum. \$EM&V per \$Total	35.2%	15.8%	15.8%
		Cum. \$Rebate per Participant (Gross)	N/A	\$39,890	\$39,890



O.30.2 2022 Virginia Non-Residential Building Optimization Program Monthly Indicator Tables

VA - Non-Residential Building Optimization Program	Measure	Indicator	2022												2022 Total	2022 Total					
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC							
O&M (\$)	Direct Rebate																				
O&M (\$)	Direct Implementation																				
O&M (\$)	Direct EM&V																				
Capital (\$)	Indirect Other (Administrative)		\$51	\$379	\$263	\$72	\$6,475	\$1,456	\$1,078	\$1,985	\$1,318	\$1,478	\$1,676	\$4,788	\$21,019	\$21,347					
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Costs (\$)	Total		\$1,223	\$9,072	\$6,293	\$1,713	\$155,075	\$34,913	\$25,817	\$47,534	\$31,567	\$35,401	\$40,133	\$114,662	\$503,402	\$510,388					
Costs (\$)	Planned		\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$94,089	\$1,100,849	\$1,100,849			
Costs (\$)	Variance		-\$92,866	-\$85,017	-\$87,795	-\$92,376	\$60,986	-\$59,176	-\$68,272	-\$40,912	-\$56,879	-\$53,045	-\$48,312	\$26,216	-\$597,447	-\$590,451					
	Annual % of Planned		0.1%	0.9%	1.5%	1.7%	15.7%	18.9%	21.3%	25.6%	28.5%	31.7%	35.3%	45.7%	46%	46%					
Participants ¹	Total (Gross)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
	Planned		6	2	2	2	2	2	2	2	2	2	2	2	2	2	28	28	28	28	
	Variance		-6	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	0	-26	-26	-26	-26	
	Annual % of Planned (Gross)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	7%	7%	7%	7%	
Installed kWh/year	Total		0	0	0	0	0	0	0	0	0	0	0	0	0	1,797,882	1,797,882	1,797,882	1,797,882	1,797,882	
	Realization Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	100%	100%	100%	100%	
	Realization Rate Adjusted (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	1,797,882	1,797,882	1,797,882	1,797,882	1,797,882	
	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	90%	90%	90%	90%	90%	
	Net-To-Gross Rate Weighted by Measure		0	0	0	0	0	0	0	0	0	0	0	0	0	-179,788	-179,788	-179,788	-179,788	-179,788	
	Net-To-Gross Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	1,618,094	1,618,094	1,618,094	1,618,094	1,618,094	
	Net Adjusted Savings (kWh/yr)		987,579	329,193	329,193	329,193	329,193	329,193	329,193	329,193	329,193	329,193	329,193	329,193	329,193	4,608,702	4,608,702	4,608,702	4,608,702	4,608,702	
	Planned Net Savings (kWh/yr)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	35.1%	35.1%	35.1%	35.1%	35.1%	
	Annual % Toward Planned Net Savings		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	898,941	898,941	898,941	898,941	898,941	
	Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	898,941	898,941	898,941	898,941	898,941	
	Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	809,047	809,047	809,047	809,047	809,047	
Installed Summer peak kW	Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.2	47.2	47.2	47.2	47.2	
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.2	47.2	47.2	47.2	47.2	
	Net-To-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	90%	90%	90%	90%	90%	
	Net-To-Gross Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-4.7	-4.7	-4.7	-4.7	-4.7	
	Net Adjusted Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.4	42.4	42.4	42.4	42.4	
	Planned Net Savings (kW)		99.6	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	465.0	465.0	465.0	465.0	465.0	
	Annual % Toward Planned Net Reduction		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	9.13%	9.13%	9.13%	9.13%	9.13%	
	Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23.6	23.6	23.6	23.6	23.6	
	Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.2	21.2	21.2	21.2	21.2	
Installed Winter peak kW	Total		-	-	-	-	-	-	-	-	-	-	-	-	-	11.7	11.7	11.7	11.7	11.7	
	Realization Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	100%	100%	100%	
	Realization Rate Adjusted (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	11.7	11.7	11.7	11.7	11.7	
	Net-To-Gross Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	90%	90%	90%	90%	90%	
	Net-To-Gross Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-1.2	-1.2	-1.2	-1.2	-1.2	
	Net Adjusted Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	10.5	10.5	10.5	10.5	10.5	
	Planned Net Savings (kW)		524.3	174.8	174.8	174.8	174.8	174.8	174.8	174.8	174.8	174.8	174.8	174.8	174.8	2,446.8	2,446.8	2,446.8	2,446.8	2,446.8	
	Annual % Toward Planned Net Reduction		-	-	-	-	-	-	-	-	-	-	-	-	-	0.43%	0.43%	0.43%	0.43%	0.43%	
	Avg. Gross Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	5.8	5.8	5.8	5.8	
	Avg. Net Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	5.3	5.3	5.3	5.3	5.3	
Program Performance	Cum. \$Admin. per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$10,673	\$10,673	\$10,673	\$10,673	\$10,673	
	Cum. \$Admin. per kWh/year (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	
	Cum. \$Admin. per kW (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$453	\$453	\$453	\$453	\$453	
	Cum. \$EM&V per \$Total		29.9%	58.2%	61.1%	62.0%	10.7%	10.4%	9.3%	15.5%	16.3%	17.9%	20.4%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%
	Cum. \$Rebate per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$39,890	\$39,890	\$39,890	\$39,890	\$39,890	



O.30.3 2021-2022 Virginia Non-Residential Building Optimization Program
Measure Indicator Tables

VA - Non-Residential Building Optimization Program			2021	2022	2021-2022
Measures					
	Schedule HVAC (gas heat)	Total Participants	0	1	1
Installed kWh/year	Schedule HVAC (gas heat)	Total Gross Energy Savings (kWh/yr)	0	266,867	266,867
	Schedule HVAC (gas heat)	Net Adjusted Savings (kWh/yr)	0	240,180	240,180
Installed Summer peak kW	Schedule HVAC (gas heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Schedule HVAC (gas heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Schedule HVAC (gas heat)	Total Gross Demand Reduction (kW)	-	-	0.0
	Schedule HVAC (gas heat)	Net Adjusted Demand Reduction (kW)	-	-	0.0
	Schedule Lighting	Total Participants	0	1	1
Installed kWh/year	Schedule Lighting	Total Gross Energy Savings (kWh/yr)	0	377,990	377,990
	Schedule Lighting	Net Adjusted Savings (kWh/yr)	0	340,191	340,191
Installed Summer peak kW	Schedule Lighting	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Schedule Lighting	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Schedule Lighting	Total Gross Demand Reduction (kW)	-	-	0.0
	Schedule Lighting	Net Adjusted Demand Reduction (kW)	-	-	0.0
	Static Pressure Reset	Total Participants	0	1	1
Installed kWh/year	Static Pressure Reset	Total Gross Energy Savings (kWh/yr)	0	64,575	64,575
	Static Pressure Reset	Net Adjusted Savings (kWh/yr)	0	58,118	58,118
Installed Summer peak kW	Static Pressure Reset	Total Gross Demand Reduction (kW)	0.0	20.1	20.1
	Static Pressure Reset	Net Adjusted Demand Reduction (kW)	0.0	18.1	18.1
Installed Winter peak kW	Static Pressure Reset	Total Gross Demand Reduction (kW)	-	11.7	11.7
	Static Pressure Reset	Net Adjusted Demand Reduction (kW)	-	10.5	10.5
	Temperature Setup	Total Participants	0	2	2
Installed kWh/year	Temperature Setup	Total Gross Energy Savings (kWh/yr)	0	122,485	122,485
	Temperature Setup	Net Adjusted Savings (kWh/yr)	0	110,236	110,236
Installed Summer peak kW	Temperature Setup	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Temperature Setup	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Temperature Setup	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Temperature Setup	Net Adjusted Demand Reduction (kW)	-	0.0	0.0



VA - Non-Residential Building Optimization Program			2021	2022	2021-2022
Measures					
	Night Temperature Setback	Total Participants	0	2	2
Installed kWh/year	Night Temperature Setback	Total Gross Energy Savings (kWh/yr)	0	171,510	171,510
	Night Temperature Setback	Net Adjusted Savings (kWh/yr)	0	154,359	154,359
Installed Summer peak kW	Night Temperature Setback	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Night Temperature Setback	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Night Temperature Setback	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Night Temperature Setback	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Outdoor Air Reduction	Total Participants	0	1	1
Installed kWh/year	Outdoor Air Reduction	Total Gross Energy Savings (kWh/yr)	0	2,104	2,104
	Outdoor Air Reduction	Net Adjusted Savings (kWh/yr)	0	1,894	1,894
Installed Summer peak kW	Outdoor Air Reduction	Total Gross Demand Reduction (kW)	0.0	5.5	5.5
	Outdoor Air Reduction	Net Adjusted Demand Reduction (kW)	0.0	5.0	5.0
Installed Winter peak kW	Outdoor Air Reduction	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Outdoor Air Reduction	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Schedule Equipment	Total Participants	0	2	2
Installed kWh/year	Schedule Equipment	Total Gross Energy Savings (kWh/yr)	0	65,232	65,232
	Schedule Equipment	Net Adjusted Savings (kWh/yr)	0	58,709	58,709
Installed Summer peak kW	Schedule Equipment	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Schedule Equipment	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Schedule Equipment	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Schedule Equipment	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Schedule HVAC (electric heat)	Total Participants	0	1	1
Installed kWh/year	Schedule HVAC (electric heat)	Total Gross Energy Savings (kWh/yr)	0	571,446	571,446
	Schedule HVAC (electric heat)	Net Adjusted Savings (kWh/yr)	0	514,301	514,301
Installed Summer peak kW	Schedule HVAC (electric heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Schedule HVAC (electric heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Schedule HVAC (electric heat)	Total Gross Demand Reduction (kW)	-	-	0.0
	Schedule HVAC (electric heat)	Net Adjusted Demand Reduction (kW)	-	-	0.0



VA - Non-Residential Building Optimization Program			2021	2022	2021-2022
Measures					
	Chilled Water Reset	Total Participants	0	0	0
Installed kWh/year	Chilled Water Reset	Total Gross Energy Savings (kWh/yr)	0	0	0
	Chilled Water Reset	Net Adjusted Savings (kWh/yr)	0	0	0
Installed Summer peak kW	Chilled Water Reset	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Chilled Water Reset	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Chilled Water Reset	Total Gross Demand Reduction (kW)	-	-	0.0
	Chilled Water Reset	Net Adjusted Demand Reduction (kW)	-	-	0.0
	Coil Cleaning	Total Participants	0	2	2
Installed kWh/year	Coil Cleaning	Total Gross Energy Savings (kWh/yr)	0	24,746	24,746
	Coil Cleaning	Net Adjusted Savings (kWh/yr)	0	22,271	22,271
Installed Summer peak kW	Coil Cleaning	Total Gross Demand Reduction (kW)	0.0	21.5	21.5
	Coil Cleaning	Net Adjusted Demand Reduction (kW)	0.0	19.4	19.4
Installed Winter peak kW	Coil Cleaning	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Coil Cleaning	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Discharge Air Temperature Reset (electric heat)	Total Participants	0	2	2
Installed kWh/year	Discharge Air Temperature Reset (electric heat)	Total Gross Energy Savings (kWh/yr)	0	130,927	130,927
	Discharge Air Temperature Reset (electric heat)	Net Adjusted Savings (kWh/yr)	0	117,834	117,834
Installed Summer peak kW	Discharge Air Temperature Reset (electric heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Discharge Air Temperature Reset (electric heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Discharge Air Temperature Reset (electric heat)	Total Gross Demand Reduction (kW)	-	0.0	0.0
	Discharge Air Temperature Reset (electric heat)	Net Adjusted Demand Reduction (kW)	-	0.0	0.0
	Dual Enthalpy Economizer Control	Total Participants	0	0	0
Installed kWh/year	Dual Enthalpy Economizer Control	Total Gross Energy Savings (kWh/yr)	0	0	0
	Dual Enthalpy Economizer Control	Net Adjusted Savings (kWh/yr)	0	0	0
Installed Summer peak kW	Dual Enthalpy Economizer Control	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Dual Enthalpy Economizer Control	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Dual Enthalpy Economizer Control	Total Gross Demand Reduction (kW)	-	-	0.0
	Dual Enthalpy Economizer Control	Net Adjusted Demand Reduction (kW)	-	-	0.0



O.30.4 2021-2022 Virginia Non-Residential Building Optimization Program Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	Average Net Impact Per Part	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CBOT	Not available	809,047	12,403	6523%	Not Available	Not Available
CBOT	Schedule GS-3	785,538	12,403	6333%	6,382,965	12%
CBOT	Schedule 10	832,556	12,403	6712%	2,381,598	35%

O.30.5 2021-2022 Virginia Non-Residential Building Optimization Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Building Optimization	2020	VA	PUR-2020-00274	4.48	3.38	3.15	1.09
Non-Residential Building Optimization	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Building Optimization	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Non-Residential Building Optimization	2023	VA	EM&V Report	17.88	6.61	5.95	0.65

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Building Optimization	2020	VA	PUR-2020-00274	4.48	3.38	3.15	1.09
Non-Residential Building Optimization	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Building Optimization	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Non-Residential Building Optimization	2023	VA	EM&V Report	17.88	6.61	5.95	0.65



0.31 Virginia Non-Residential Building Automation Program 2021-2022

0.31.1 2021-2022 Virginia Non-Residential Building Automation Program Annual Indicator Tables

VA - Non-Residential Building Automation System Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$315	\$17,764	\$18,079
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$6,714	\$425,457	\$432,171
Costs (\$)		Planned	\$0	\$961,106	\$961,106
Costs (\$)		Variance	\$6,714	-\$535,649	-\$528,934
		Annual % of Planned	N/A	44%	45%
Participants ¹		Total (Gross)	0	0	0
		Planned	0	28	28
		Variance	0	-28	-28
		Annual % of Planned (Gross)	N/A	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0
		Planned Net Savings (kWh/yr)	0	3,779,975	3,779,975
		Annual % Toward Planned Net Savings	N/A	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
		Realization Rate Weighted by Measure	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	381.4	381.4
		Annual % Toward Planned Net Reduction	N/A	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	0.0
		Realization Rate Weighted by Measure	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	0.0
		Net Adjusted Demand Reduction (kW)	-	-	0.0
		Planned Net Savings (kW)	-	-	2,006.8
		Annual % Toward Planned Net Reduction	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	32.6%	6.6%	6.6%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A



O.31.2 2022 Virginia Non-Residential Building Automation Program Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2021-2022 Total	
O&M (\$)	Direct Rebate		\$51	\$237	\$251	\$64	\$7,753	\$1,718	\$1,280	\$1,438	\$1,245	\$1,272	\$1,272	\$1,191	\$17,764	\$18,079	
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Direct EM&V		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Indirect Other (Administrative)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Capital (\$)																	
Costs (\$)	Total		\$1,223	\$5,680	\$6,023	\$1,544	\$165,684	\$41,153	\$30,665	\$34,429	\$29,626	\$30,227	\$30,476	\$28,526	\$425,457	\$432,171	
	Planned		\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145	\$82,145
Costs (\$)	Variance		-\$80,923	-\$76,465	-\$76,122	-\$80,601	\$1,033,539	-\$40,992	-\$51,480	-\$42,789	-\$47,392	-\$46,991	-\$46,742	-\$48,632	-\$535,649	-\$528,934	
	Annual % of Planned		0.1%	0.7%	1.3%	1.5%	20.8%	25.1%	28.3%	31.9%	35.9%	38.1%	41.3%	44.3%	44.3%	45%	
Participants ¹	Total (Gross)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Planned		6	2	2	2	2	2	2	2	2	2	2	2	2	28	
	Variance		-6	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-28	
	Annual % of Planned (Gross)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Installed kWh/year	Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net-To-Gross Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Net-To-Gross Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Planned Net Savings (kWh/yr)		809,995	269,998	269,998	269,998	269,998	269,998	269,998	269,998	269,998	269,998	269,998	269,998	269,998	3,779,975	
	Annual % Toward Planned Net Savings		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Installed Summer peak kW	Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Realization Rate Weighted by Measure			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Realization Rate Adjustment (kW)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Realization Rate Adjusted Gross Demand Reduction (kW)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net-To-Gross Rate Weighted by Measure			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Net-To-Gross Adjustment (kW)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net Adjusted Demand Reduction (kW)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Planned Net Savings (kW)			81.7	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	381.4	
Annual % Toward Planned Net Reduction			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Avg. Gross Demand Reduction Per Participant (kW)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Avg. Net Demand Reduction Per Participant (kW)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Winter peak kW		Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Realization Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Realization Rate Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Realization Rate Adjusted Gross Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Net-To-Gross Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Net-To-Gross Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Net Adjusted Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Planned Net Savings (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Annual % Toward Planned Net Reduction		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Avg. Gross Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Avg. Net Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Program Performance	Cum. \$ Admin. per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cum. \$ Admin. per kWh/year (Gross)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Cum. \$ Admin. per kW (Gross)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Cum. \$EM&V per \$1 total			27.6%	47.7%	52.4%	54.0%	6.6%	5.9%	6.8%	7.1%	6.8%	6.8%	7.1%	6.6%	6.5%	6.6%	
Cum. \$Rebate per Participant (Gross)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



O.31.3 2021-2022 Virginia Non-Residential Building Automation Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Building Automation System	2020	VA	PUR-2020-00274	7.91	5.83	4.92	1.27
Non-Residential Building Automation System	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Non-Residential Building Automation System	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Non-Residential Building Automation System	2023	VA	EM&V Report	N/A	N/A	N/A	N/A



O.32 Virginia Non-Residential Customer Engagement Program 2021-2022

O.32.1 2021-2022 Virginia Non-Residential Customer Engagement Program Annual Indicator Tables

VA - Non-Residential Engagement Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$380	\$25,032	\$25,412
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$8,109	\$599,509	\$607,618
Costs (\$)		Planned	\$0	\$1,536,746	\$1,536,746
Costs (\$)		Variance	\$8,109	-\$937,237	-\$929,128
		Annual % of Planned	N/A	39%	40%
Participants ¹		Total (Gross)	0	0	0
		Planned	0	54	54
		Variance	0	-54	-54
		Annual % of Planned (Gross)	N/A	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0
		Planned Net Savings (kWh/yr)	0	3,975,577	3,975,577
		Annual % Toward Planned Net Savings	N/A	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
		Realization Rate Weighted by Measure	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	401.0	401.0
		Annual % Toward Planned Net Reduction	N/A	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	0.0
		Realization Rate Weighted by Measure	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	0.0
		Net Adjusted Demand Reduction (kW)	-	-	0.0
		Planned Net Savings (kW)	-	-	2,110.7
		Annual % Toward Planned Net Reduction	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	43.4%	7.7%	7.7%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A



O.33 Virginia Residential Smart Cooling Rewards Program 2010-2022

O.33.1 2010-2022 Virginia Residential Smart Cooling Rewards Program Annual Indicator Tables

Category	Measure	Indicator	2010 Total	2011 Total	2012 Total	2013 Total	2014 Total	2015 Total	2016 Total	2017 Total	2018 Total	2019 Total	2020 Total	2021 Total	2010-2022 Total	
O&M (\$)	Direct Rebate															
	Direct Implementation															
	Direct EM&V															
	Indirect Other (Administrative)															
	Capital (\$)															
	Costs (\$)															
	Costs (\$)															
	Costs (\$)															
	Variance															
	Annual % of Planned															
Participants ¹	Total (Cumulative @ End of Month)		10,900	36,545	66,890	91,280	115,083	140,022	147,723	149,219	151,798	154,787	155,586	156,210	160,172	
	Removals (Uninstalled) / Deactivations		90	2,606	5,516	12,370	23,146	36,769	49,635	59,937	71,171	79,401	87,123	95,733	105,604	
	Opt-outs		98	309	18	16	18	93	353	30	30	27	26	23	6	5
	Adjusted Participants (Cum.)		10,712	33,630	61,356	78,894	91,920	103,160	98,088	89,282	80,627	75,386	68,463	60,477	54,568	
	In Service Rate Adjustment (Cum.)		428	1,345	2,454	3,166	3,677	0	0	0	0	0	0	0	0	0
	Net Participation (Cum.)		10,283	32,285	58,901	75,738	88,243	103,160	98,088	89,282	80,627	75,386	68,463	60,477	54,568	
	Planned (Cum.)		9,244.0	33,996.0	73,598.0	96,706.0	115,702.0	103,915.0	97,037.0	90,267.0	80,765.0	70,765.0	60,765.0	50,765.0	40,765.0	
	Variance (Cum.)		1,039.2	-1,711.1	-14,696.6	-20,967.6	-27,458.2	-7,754.9	-5,165.0	-9,640.0	-12,302.0	-12,302.0	-12,302.0	-12,302.0	-12,302.0	
	Cum % toward planned total (Net basis)		111.2%	95.0%	80.0%	76.3%	76.3%	76.3%	76.3%	76.3%	76.3%	76.3%	76.3%	76.3%	76.3%	
	Removal (Uninstalled) / Deactivation Rate		0.22%	0.82%	0.48%	0.81%	1.02%	1.02%	1.15%	1.05%	0.92%	1.11%	0.90%	0.90%	0.94%	
Average % Opt-outs (rate)		0.91%	0.91%	0.03%	0.02%	0.02%	0.02%	0.09%	0.36%	0.03%	0.03%	0.03%	0.03%	0.01%		
Summer kW Potential	Connected Load kW		17,840.77	92,797.52	203,883.50	264,998.30	296,858.69	304,177.17	291,198.57	267,856.53	247,443.50	234,735.76	221,076.68	199,449.74	179,418	
	Ex-Ante Estimated kW		0.94	0.96	1.09	0.95	0.78	0.71	0.97	0.68	0.63	0.63	0.63	0.53	0.49	
	Connected Load Per Participant (kW)		1.73	2.87	3.46	3.50	3.36	2.95	2.97	3.00	3.07	3.11	3.23	3.30	3.29	
	Summer Peak Shaving Potential kW - Gross Participants		11,990	40,200	73,579	100,408	80,558	99,416	143,291	101,469	95,236	96,895	96,623	83,321	79,137	
	Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW		99	2,867	6,068	13,607	16,202	26,106	40,757	40,757	44,652	49,704	55,226	51,063	52,176	
	Less Opt-outs (kW)		108	340	20	17	13	66	343	21	21	17	16	15	3	
	Dispatchable Summer Peak Shaving Potential - Total kW		11,783	36,993	67,491	86,794	64,344	73,244	94,803	60,691	50,567	47,175	43,383	32,255	26,958	
	In Service Rate Adjustment (Cum.)		471	1,480	2,700	3,471	2,574	0	0	0	0	0	0	0	0	
	Realization Rate Weighted by Measure		96.0%	96.0%	96.0%	96.0%	96.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	Adjustment for Realization Rate		430	-3,906	389	18,195	4,633	0	0	0	0	0	0	0	0	
Net Summer Demand (Cum.)		10,880	39,420	64,403	65,117	57,137	73,244	94,803	60,691	50,567	47,175	43,383	32,255	26,958		
Cum % toward planned total (Net basis)		123.59%	122.07%	92.29%	70.95%	51.76%	69.30%	71.1%	97	68	63	63	63	53		
Dispatchable Summer Peak Shaving Potential kW per Participant		1.06	1.23	1.09	0.96	0.65	0.71	0.97	0.68	0.63	0.63	0.63	0.53	0.49		
Program Performance	Cum. \$Admin. per Participant (Gross)		\$80	\$45	\$35	\$33	\$29	\$25	\$25	\$26	\$28	\$29	\$31	\$32		
	Cum. \$Admin. per kW (Gross)		\$73	\$41	\$32	\$30	\$41	\$35	\$26	\$39	\$45	\$46	\$48	\$60		
	Cum. \$EM&V per \$Total		1.0%	1.5%	1.3%	1.3%	1.2%	1.2%	1.5%	1.7%	1.8%	1.9%	1.9%	2.1%		
	Cum. \$Rebate per Participant (Gross)		\$16	\$37	\$52	\$70	\$86	\$99	\$118	\$141	\$159	\$176	\$193	\$206		



O.33.2 2022 Virginia Residential Smart Cooling Rewards Program Monthly Indicator Tables

VA - Residential Smart Cooling Reward Program	Indicator	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2010-2022	
Category	Measure	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	Total	Total	Total	Total	Total	Total
O&M (\$)	Direct Rebate																				
O&M (\$)	Direct Implementation																				
O&M (\$)	Direct EM&V																				
Capital (\$)	Indirect Other (Administrative)																				
Capital (\$)	Direct Implementation	\$8,532	\$10,012	\$8,232	\$6,988	\$11,119	\$29,876	\$29,622	\$31,312	\$30,936	\$4,008	\$8,337	\$7,322	\$188,298	\$4,200	\$0	\$0	\$0	\$0	\$0	\$5,183,132
Costs (\$)	Total	\$204,800	\$240,768	\$197,693	\$215,332	\$267,200	\$716,286	\$709,975	\$749,934	\$740,925	\$95,988	\$199,680	\$175,354	\$4,513,938	\$4,513,938	\$0	\$0	\$0	\$0	\$0	\$19,201,348
Costs (\$)	Planned	\$211,143	\$211,143	\$211,143	\$211,143	\$211,143	\$897,360	\$897,360	\$897,360	\$897,360	\$211,143	\$211,143	\$211,143	\$5,278,587	\$5,278,587	\$0	\$0	\$0	\$0	\$0	\$91,980,606
Costs (\$)	Variance	-\$6,343	\$29,624	-\$13,451	\$4,189	\$56,057	-\$181,073	-\$187,385	-\$147,426	-\$156,434	-\$115,155	-\$11,464	-\$35,789	-\$764,651	-\$764,651	\$0	\$0	\$0	\$0	\$0	\$123,032,545
	Annual % of Planned	3.9%	8.4%	12.2%	16.3%	21.3%	34.9%	48.3%	62.6%	76.6%	78.4%	82.2%	85.5%	86%							75%
Participants ¹	Total (Cumulative @ End of Month)	156,224	156,230	156,242	156,249	156,261	156,296	156,313	156,321	160,087	160,167	160,172	160,172	160,172	160,172	160,172	160,172	160,172	160,172	160,172	160,172
	Removals (Uninstalled) / Deactivations	96,302	96,789	97,180	97,780	98,312	99,021	99,816	100,400	100,765	104,611	105,348	105,604	105,604	105,604	105,604	105,604	105,604	105,604	105,604	105,604
	Opt-outs	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	Adjusted Participants (Cum.)	59,922	59,441	59,062	58,469	57,949	57,275	56,497	55,921	55,302	55,556	54,819	54,568	54,568	54,568	54,568	54,568	54,568	54,568	54,568	54,568
	In Service Rate Adjustment (Cum.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net Participation (Cum.)	59,922	59,441	59,062	58,469	57,949	57,275	56,497	55,921	55,302	55,556	54,819	54,568	54,568	54,568	54,568	54,568	54,568	54,568	54,568	54,568
	Planned (Cum.)	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0	57,105.0
	Variance (Cum.)	2,817.0	2,336.0	1,957.0	1,364.0	844.0	170.0	-608.0	-1,184.0	-2,197.0	-1,549.0	-2,286.0	-2,537.0	-2,537.0	-2,537.0	-2,537.0	-2,537.0	-2,537.0	-2,537.0	-2,537.0	-2,537.0
	Cum % toward planned total (Net basis)	104.9%	104.1%	103.4%	102.4%	101.5%	100.3%	98.9%	97.3%	95.6%	93.8%	92.0%	90.2%	88.4%	86.6%	84.8%	83.0%	81.2%	79.4%	77.6%	75.8%
	Removal (Uninstalled) / Deactivation Rate	0.95%	0.82%	0.66%	0.53%	0.42%	0.32%	0.24%	0.18%	0.14%	0.11%	0.09%	0.07%	0.06%	0.05%	0.04%	0.03%	0.02%	0.02%	0.02%	0.02%
	Average % Opt-outs (rate)	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
	Connected Load kW	187,505	186,508	184,808	183,217	181,424	178,948	177,235	176,178	176,764	174,387	173,483	172,561	179,418.23	179,418.23	179,418.23	179,418.23	179,418.23	179,418.23	179,418.23	179,418.23
	Ex-Ante Estimated kW	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
	Connected Load Per Participant (kW)	3.13	3.14	3.13	3.13	3.13	3.12	3.13	3.15	3.16	3.14	3.16	3.16	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29
Summer kW Potential	Summer Peak Shaving Potential kW - Gross Participants	77,187	77,189	77,195	77,199	77,205	77,222	77,231	77,234	79,085	79,135	79,135	79,137	79,137	79,137	79,137	79,137	79,137	79,137	79,137	79,137
	Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW	47,581	47,821	48,014	48,311	48,574	48,924	49,317	49,605	49,786	51,886	52,050	52,176	52,176	52,176	52,176	52,176	52,176	52,176	52,176	52,176
	Less Opt-outs (kW)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Dispatchable Summer Peak Shaving Potential - Total kW	29,603	29,365	29,178	28,885	28,628	28,295	27,911	27,626	29,297	27,446	27,082	26,958	26,958	26,958	26,958	26,958	26,958	26,958	26,958	26,958
	In Service Rate Adjustment (Cum.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Weighted by Measure	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Adjustment for Realization Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net Summer Demand (Cum.)	29,603	29,365	29,178	28,885	28,628	28,295	27,911	27,626	29,297	27,446	27,082	26,958	26,958	26,958	26,958	26,958	26,958	26,958	26,958	26,958
	Planned Summer Demand (Cum.)	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0	30,437.0
	Cum. % toward planned total (Net basis)	97.26%	96.48%	95.86%	94.90%	94.06%	92.96%	91.70%	90.77%	96.25%	90.17%	88.98%	88.57%	88.57%	88.57%	88.57%	88.57%	88.57%	88.57%	88.57%	88.57%
	Dispatchable Summer Peak Shaving Potential kW per Participant	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Program Performance	Cum. \$Admin. per Participant (Gross)	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32	\$32
	Cum. \$Admin. per kW (Gross)	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$65
	Cum. \$EM&V per \$ total	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%
	Cum. \$Rebate per Participant (Gross)	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206	\$206



O.33.3 2010–2022 Virginia Residential Smart Cooling Rewards Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Smart Cooling Reward	2007	VA	PUE-2007-00089	N/A	N/A	N/A	N/A
Residential Smart Cooling Reward	2009	VA	PUE-2009-00081	++	1.15	2.17	1.15
Residential Smart Cooling Reward	2011	VA	PUE-2011-00093	N/A	N/A	N/A	N/A
Residential Smart Cooling Reward	2012	VA	PUE-2012-00100	N/A	1.2	1.98	1.2
Residential Smart Cooling Reward	2013	VA	PUE-2013-00072	N/A	N/A	N/A	N/A
Residential Smart Cooling Reward	2014	VA	PUE-2014-00071	++	0.71	1.06	0.71
Residential Smart Cooling Reward	2015	VA	PUE-2015-00089	++	1.05	1.63	1.05
Residential Smart Cooling Reward	2016	VA	PUE-2016-00111	++	0.62	0.9	0.62
Residential Smart Cooling Reward	2018	VA	PUR-2018-00168	++	0.96	1.47	0.96
Residential Smart Cooling Reward	2019	VA	PUR-2019-00201	++	0.61	0.91	0.61
Residential Smart Cooling Reward	2020	VA	PUR-2020-00274	++	0.01	0.03	0.01
Residential Smart Cooling Reward	2021	VA	PUR-2021-00247	++	0.42	1	0.42
Residential Smart Cooling Reward	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Residential Smart Cooling Reward	2023	VA	EM&V Report	N/A	N/A	N/A	N/A

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O.34 Virginia Non-Residential Distributed Generation Program 2012-2022

O.34.1 2012-2022 Virginia Non-Residential Distributed Generation Program Annual Indicator Tables

Category	Measure	Indicator	2012 Total	2013 Total	2014 Total	2015 Total	2016 Total	2017 Total	2018 Total	2019 Total	2020 Total	2021 Total	2022 Total	2012-2022 Total	
VA - Non-Residential Distributed Generation Program	O&M (\$)	Direct Rebate													
	O&M (\$)	Direct Implementation													
	O&M (\$)	Direct EM&V													
	O&M (\$)	Indirect Other (Administrative)													
	Capital (\$)	Direct Implementation	\$45,196	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Costs (\$)	Total	\$474,517	\$704,695	\$1,107,382	\$538,023	\$572,348	\$561,690	\$557,961	\$589,631	\$570,747	\$608,132	\$620,104	\$620,104	\$6,905,228
	Costs (\$)	Planned	\$2,261,356	\$2,464,188	\$2,011,074	\$947,030	\$851,134	\$730,107	\$874,549	\$909,830	\$1,014,629	\$1,015,757	\$1,152,164	\$1,152,164	\$14,231,816
	Costs (\$)	Variance	-\$1,786,840	-\$1,759,493	-\$903,692	-\$409,007	-\$278,787	-\$168,417	-\$316,588	-\$320,199	-\$443,882	-\$407,626	-\$532,057	-\$532,057	-\$7,326,588
		Annual % of Planned	21%	29%	55%	57%	67%	77%	64%	65%	65%	56%	60%	54%	49%
	Participants ¹	Total (Cumulative @ End of Month)	19,04	19,41	18,58	6,10	6,50	6,10	6,10	6,13	6,13	6,13	5,97	5,88	5,88
	Planned (Cum.)	23.0	28.0	35.0	13.0	7.0	7.4	7.1	7.6	7.6	9.0	7.1	7.1	7.1	
	Variance (Cum.)	-4.0	-8.6	-16.4	-6.9	-0.5	-1.3	-2.0	-1.5	-2.9	-2.9	-1.2	-1.2	-1.2	
	Cum % toward planned total (Net basis)	82.8%	69.3%	53.1%	46.9%	92.9%	82.5%	75.2%	80.7%	80.7%	67.9%	83.7%	82.5%	82.5%	
Summer kW Potential	Total (Cumulative @ End of Month)	19,040	19,410	18,580	6,100	6,500	6,100	6,100	6,130	6,130	6,130	5,970	5,880	5,880	
	Realization Rate Weighted by Measure	84.3%	83.0%	76.0%	93.0%	75.8%	86.0%	86.0%	97.0%	113.0%	106.0%	111.0%	104.0%	104.0%	
	Adjustment for Realization Rate	-2,989	-3,300	-4,459	-411	-1,392	-858	-858	-184	797	368	657	235	235	
	Net Summer Demand (Cum.)	16,051	16,110	14,121	5,689	5,108	5,242	5,242	5,946	6,927	6,498	6,627	6,115	6,115	
	Planned Summer Demand (Cum.)	23,000	28,000	35,000	13,000	7,000	7,394	7,394	8,149	7,592	9,025	7,130	7,130	7,130	
	Cum. % toward planned total (Net basis)	69.79%	57.54%	40.35%	43.76%	72.97%	70.89%	70.89%	72.97%	91.24%	72.00%	92.95%	85.77%	85.77%	
	Dispatchable Summer Peak Shaving Potential kW per Participant	843.00	830.00	760.00	932.58	785.65	859.31	859.31	970.00	1,130.00	1,060.00	1,110.00	1,039.97	924.61	
Winter kW Potential	Total (Cumulative @ End of Month)	19,040	19,410	18,580	6,100	6,500	6,100	6,100	6,130	6,130	6,130	5,970	5,880	5,880	
	Realization Rate Weighted by Measure	84.3%	83.0%	76.0%	93.0%	75.8%	86.0%	86.0%	97.0%	113.0%	106.0%	111.0%	104.0%	104.0%	
	Adjustment for Realization Rate														
	Net Winter Demand (Cum.)	19,040.00	19,410.00	18,580.00	6,100.00	6,500.00	6,100.00	6,100.00	6,130.00	6,130.00	6,130.00	5,970.00	5,880.00	5,880.00	
	Planned Winter Demand (Cum.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Cum. % toward planned total (Net basis)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Dispatchable Winter Peak Shaving Potential kW per Participant	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,110.00	1,039.97	-39.97	
Program Performance	Cum. \$Admin. per Participant (Gross)	\$2,374	\$5,973	\$9,207	\$30,490	\$31,290	\$36,698	\$41,658	\$45,954	\$50,908	\$57,049	\$62,325	\$62,325	\$62,325	
	Cum. \$Admin. per kW (Gross)	\$2	\$6	\$9	\$30	\$31	\$37	\$42	\$46	\$51	\$57	\$62	\$62	\$62	
	Cum. \$EM&V per \$Total	3.3%	7.5%	8.8%	9.5%	11.6%	12.5%	13.3%	13.4%	13.4%	13.2%	13.4%	13.3%	13.3%	
	Cum. \$Rebate per Participant (Gross)	\$21,366	\$47,494	\$99,549	\$376,393	\$418,435	\$513,179	\$577,089	\$651,772	\$728,973	\$828,578	\$927,835	\$927,835	\$927,835	



O.34.2 2022 Virginia Non-Residential Distributed Generation Program Monthly Indicator Tables

VA - Non-Residential Distributed Generation Program		2022												2012-2022		
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total
O&M (\$)	Direct Rebate		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	Direct Implementation		\$36,233	\$45,219	\$45,906	\$40,967	\$45,077	\$63,808	\$71,341	\$85,046	\$76,498	\$35,456	\$47,027	\$27,524	\$620,104	\$6,905,228
O&M (\$)	Direct EM&V		\$149,781	\$57,608	\$11,522	\$57,608	\$172,824	\$126,738	\$115,216	\$80,651	\$138,259	\$27,608	\$103,694	\$1,152,161	\$14,231,816	
O&M (\$)	Indirect Other (Administrative)		-\$113,548	-\$12,389	\$34,385	-\$16,641	-\$127,747	-\$62,929	-\$43,875	\$4,395	-\$61,761	-\$22,152	-\$33,624	-\$76,170	-\$532,057	-\$7,326,588
Capital (\$)	Direct Implementation		3.1%	7.1%	11.1%	14.6%	18.5%	24.1%	30.3%	37.6%	44.3%	47.4%	51.4%	53.8%	54%	49%
Costs (\$)	Total		5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88
Costs (\$)	Planned		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Costs (\$)	Variance (Cum.)		-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.2	-1.2
Costs (\$)	Cum % toward planned total (Net basis)		82.5%	82.5%	82.5%	82.5%	82.5%	82.5%	82.5%	82.5%	82.5%	82.5%	82.5%	82.5%	82.5%	82.5%
Participants ¹	Total (Cumulative @ End of Month)		5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Summer kW Potential	Realization Rate Weighted by Measure		104.0%	104.0%	104.0%	104.0%	104.0%	104.0%	104.0%	104.0%	104.0%	104.0%	104.0%	104.0%	104.0%	104.0%
	Adjustment for Realization Rate		235	235	235	235	235	235	235	235	235	235	235	235	235	235
	Net Summer Demand (Cum.)		6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115
	Planned Summer Demand (Cum.)		7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0
	Cum. % toward planned total (Net basis)		85.77%	85.77%	85.77%	85.77%	85.77%	85.77%	85.77%	85.77%	85.77%	85.77%	85.77%	85.77%	85.77%	85.77%
	Dispatchable Summer Peak Shaving Potential kW per Participant		1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	924.61
Winter kW Potential	Total (Cumulative @ End of Month)		5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	0
	Realization Rate Weighted by Measure		104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104.0%	N/A
	Adjustment for Realization Rate		235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0
	Net Winter Demand (Cum.)		6,115.00	6,115.00	6,115.00	6,115.00	6,115.00	6,115.00	6,115.00	6,115.00	6,115.00	6,115.00	6,115.00	6,115.00	6,115.00	-235.00
	Planned Winter Demand (Cum.)		7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,130.0	7,129.7
	Cum. % toward planned total (Net basis)		85.76%	85.76%	85.76%	85.76%	85.76%	85.76%	85.76%	85.76%	85.76%	85.76%	85.76%	85.76%	85.76%	-3.39%
	Dispatchable Winter Peak Shaving Potential kW per Participant		1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	1,039.97	-39.97
Program Performance	Cum. \$Admin. per Participant (Gross)		\$58,179	\$58,500	\$58,826	\$59,117	\$59,437	\$59,890	\$60,397	\$61,001	\$61,544	\$61,796	\$62,130	\$62,325	\$62,325	\$62,325
	Cum. \$Admin. per kW (Gross)		\$58	\$59	\$59	\$59	\$59	\$60	\$60	\$61	\$62	\$62	\$62	\$62	\$62	\$62
	Cum. \$EM&V per \$ Total		13.3%	13.3%	13.4%	13.3%	13.4%	13.3%	13.2%	13.3%	13.2%	13.3%	13.4%	13.3%	13.3%	13.3%
	Cum. \$Rebate per Participant (Gross)		\$847,138	\$853,016	\$858,894	\$864,771	\$870,766	\$880,009	\$891,557	\$902,847	\$913,948	\$917,472	\$923,350	\$927,835	\$927,835	\$927,835



O.34.3 2012–2022 Virginia Non-Residential Distributed Generation Program
Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Non-Residential Distributed Generation	2007	VA	PUE-2007-00089	N/A	N/A	N/A	N/A
Non-Residential Distributed Generation	2009	VA	PUE-2009-00081	4.92	0.81	2.31	0.8
Non-Residential Distributed Generation	2011	VA	PUE-2011-00093	2.25	1.72	3.26	1.71
Non-Residential Distributed Generation	2012	VA	PUE-2012-00100	N/A	N/A	N/A	N/A
Non-Residential Distributed Generation	2013	VA	PUE-2013-00072	2.1	2.23	2.93	2.22
Non-Residential Distributed Generation	2014	VA	PUE-2014-00071	2.1	1.14	1.4	1.14
Non-Residential Distributed Generation	2015	VA	PUE-2015-00089	2.43	2.58	4.14	2.57
Non-Residential Distributed Generation	2016	VA	PUE-2016-00111	6.65	1.08	2.22	1.08
Non-Residential Distributed Generation	2018	VA	PUR-2018-00168	6.35	1.65	3.42	1.55
Non-Residential Distributed Generation	2019	VA	PUR-2019-00201	5.36	1.48	3.28	1.35
Non-Residential Distributed Generation	2020	VA	PUR-2020-00274	4.88	1.53	3.35	1.47
Non-Residential Distributed Generation	2021	VA	PUR-2021-00247	7.48	2.05	9.61	1.9
Non-Residential Distributed Generation	2022	VA	PUR-2022-00210	1.97	1.77	2.61	1.65
Non-Residential Distributed Generation	2023	VA	EM&V Report	++	0.86	2.56	0.82



0.35 Virginia Residential Electric Vehicle Rewards Program 2020-2022

0.35.1 2020-2022 Virginia Residential Electric Vehicle Rewards Program Annual Indicator Tables

VA - Residential Electric Vehicle Rewards Program Category	Measure	Indicator	2020 Total	2021 Total	2022 Total	2020-2022 Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)					
Capital (\$)	Direct Implementation		\$599	\$8,557	\$7,472	\$16,628
			\$0	\$0	\$0	\$0
Costs (\$)	Total		\$14,036	\$182,492	\$178,959	\$375,487
Costs (\$)	Planned		\$0	\$299,301	\$315,959	\$615,260
Costs (\$)	Variance		\$14,036	-\$116,809	-\$137,000	-\$239,773
	Annual % of Planned		N/A	61%	57%	61%
Participants ¹	Total (Cumulative @ End of Month)		0	0	686	686
	Removals (Uninstalled) / Deactivations		0	0	0	0
	Opt-outs		0	0	0	0
	Adjusted Participants (Cum.)		0	0	686	686
	Net Participation (Cum.)		0	0	686	686
	Planned (Cum.)		0.0	652.0	631.0	831.0
	Variance (Cum.)		0.0	-652.0	-145.0	-145.0
	Cum % toward planned total (Net basis)		N/A	0.0%	82.6%	82.6%
	Removal (Uninstalled) / Deactivation Rate		N/A	N/A	0.00%	0.00%
	Average % Opt-outs (rate)		0.00%	0.00%	0.00%	0.00%
	Ex-Ante Estimated kW		0.00	0.00	0.00	0.00
Summer kW Potential	Summer Peak Shaving Potential kW - Gross Participants		0	0	0	0
	Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW		0	0	0	0
	Dispatchable Summer Peak Shaving Potential - Total kW		0	0	0	0
	Realization Rate Weighted by Measure		100.0%	100.0%	0.0%	0.0%
	Adjustment for Realization Rate		0	0	0	0
	Net Summer Demand (Cum.)		0	0	0	0
	Planned Summer Demand (Cum.)		0	652	831	831
	Cum. % toward planned total (Net basis)		N/A	0.00%	0.00%	0.00%
	Dispatchable Summer Peak Shaving Potential kW per Participant		0.00	0.00	0.00	0.00
Measures						
No measures available						
Program Performance						
	Cum. \$Admin. per Participant (Gross)		N/A	N/A	\$24	\$24
	Cum. \$Admin. per kW (Gross)		N/A	N/A	N/A	N/A
	Cum. \$EM&V per \$Total		45.0%	15.8%	12.8%	12.8%
	Cum. \$Rebate per Participant (Gross)		N/A	N/A	\$0	\$0



O.35.2 2022 Virginia Residential Electric Vehicle Rewards Program Monthly Indicator Tables

VA - Residential Electric Vehicle Rewards Program		Indicator												2022 Total	
Category	Measure	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2022 Total	2023 Total
O&M (\$)	Direct Rebate	\$44	\$98	\$122	\$91	\$134	\$108	\$92	\$490	\$195	\$252	\$468	\$5,376	\$7,472	\$14,628
O&M (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	Direct EM&V	\$1,059	\$2,344	\$2,922	\$2,174	\$3,216	\$2,597	\$2,201	\$11,737	\$4,681	\$6,044	\$11,220	\$128,765	\$178,959	\$375,487
O&M (\$)	Indirect Other (Administrative)	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$315,959
Capital (\$)	Direct Implementation	-\$25,271	-\$23,986	-\$23,408	-\$24,156	-\$23,114	-\$23,733	-\$24,129	-\$14,593	-\$21,649	-\$20,286	-\$15,110	\$102,435	-\$137,000	-\$238,773
Costs (\$)	Total	0.3%	1.1%	2.0%	2.7%	3.7%	4.5%	5.2%	8.9%	10.4%	12.3%	15.9%	56.6%	57%	61%
Costs (\$)	Planned	0	0	0	113	216	259	288	403	482	537	611	686	686	686
Costs (\$)	Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Participants ¹	Total (Cumulative @ End of Month)	0	0	0	113	216	259	288	403	482	537	611	686	686	686
	Removals (Uninstalled) / Deactivations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Opt-outs	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Adjusted Participants (Cum.)	0	0	0	113	216	259	288	403	482	537	611	686	686	686
	Net Participation (Cum.)	0	0	0	113	216	259	288	403	482	537	611	686	686	686
	Planned (Cum.)	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0
	Variance (Cum.)	-831.0	-831.0	-831.0	-718.0	-615.0	-572.0	-543.0	-428.0	-349.0	-294.0	-220.0	-145.0	-145.0	-145.0
	Cum % toward planned total (Net basis)	0.0%	0.0%	0.0%	13.6%	26.0%	31.2%	34.7%	48.5%	58.0%	64.6%	73.5%	82.6%	82.6%	82.6%
	Removal (Uninstalled) / Deactivation Rate	N/A	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Average % Opt-outs (rate)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Ex-Ante Estimated kW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summer kW Potential	Summer Peak Shaving Potential kW - Gross Participants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Dispatchable Summer Peak Shaving Potential - Total kW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Weighted by Measure	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Adjustment for Realization Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net Summer Demand (Cum.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Planned Summer Demand (Cum.)	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0
	Cum. % toward planned total (Net basis)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Dispatchable Summer Peak Shaving Potential kW per Participant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Program Performance	Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	\$84	\$45	\$38	\$34	\$26	\$22	\$20	\$18	\$24	\$24	\$24
	Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cum. \$EM&V per \$Total	15.7%	15.7%	15.5%	15.3%	15.1%	14.9%	14.7%	16.0%	16.5%	17.3%	19.5%	12.8%	12.8%	12.8%
	Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Dominion

EXTRAORDINARILY SENSITIVE INFORMATION REDACTED

Sub 645



O.35.3 2020-2022 Virginia Residential Electric Vehicle Rewards Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Electric Vehicle Rewards	2019	VA	PUR-2019-00201	136.42	1.31	2.22	1.31
Residential Electric Vehicle Rewards	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Electric Vehicle Rewards	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Electric Vehicle Rewards	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Residential Electric Vehicle Rewards	2023	VA	EM&V Report	N/A	N/A	N/A	N/A



O.36 Virginia Residential Thermostat Rewards Program 2020–2022

O.36.1 2020–2022 Virginia Residential Thermostat Rewards Program Annual Indicator Tables

VA - Residential Smart Thermostat Rewards Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$4,128	\$33,978	\$47,737	\$85,843
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$96,743	\$724,644	\$1,143,292	\$1,964,679
Costs (\$)		Planned	\$0	\$1,892,494	\$1,914,911	\$3,807,405
Costs (\$)		Variance	\$96,743	-\$1,167,850	-\$771,619	-\$1,842,726
		Annual % of Planned	N/A	38%	60%	52%
Participants ¹		Total (Cumulative @ End of Month)	0	6,329	13,084	13,084
		Removals (Uninstalled) / Deactivations	0	982	2,474	2,474
		Opt-outs	0	0	0	0
		Adjusted Participants (Cum.)	0	5,347	10,610	10,610
		Net Participation (Cum.)	0	5,347	10,610	10,610
		Planned (Cum.)	0.0	6,400.0	19,433.0	19,433.0
		Variance (Cum.)	0.0	-1,053.0	-8,823.0	-8,823.0
		Cum % toward planned total (Net basis)	N/A	83.5%	54.6%	54.6%
		Removal (Uninstalled) / Deactivation Rate	N/A	3.23%	1.58%	2.33%
		Average % Opt-outs (rate)	0.00%	0.00%	0.00%	0.00%
		Ex-Ante Estimated kW	0.00	1.07	0.94	0.94
Summer kW Potential		Summer Peak Shaving Potential kW - Gross Participants	0	6,740	12,299	13,796
		Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW	0	1,046	2,326	2,326
		Dispatchable Summer Peak Shaving Potential - Total kW	0	5,695	9,973	11,471
		Realization Rate Weighted by Measure	100.0%	100.0%	100.0%	100.0%
		Adjustment for Realization Rate	0	0	0	0
		Net Summer Demand (Cum.)	0	5,695	9,973	11,471
		Planned Summer Demand (Cum.)	0	10,176	30,898	30,898
		Cum. % toward planned total (Net basis)	N/A	55.96%	32.28%	37.12%
		Dispatchable Summer Peak Shaving Potential kW per Participant	0.00	1.07	0.94	0.94
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$6	\$7	\$7
		Cum. \$Admin. per kW (Gross)	N/A	\$6	\$7	\$6
		Cum. \$EM&V per \$Total	26.7%	13.2%	16.4%	16.4%
		Cum. \$Rebate per Participant (Gross)	N/A	\$21	\$25	\$25



O.36.2 2022 Virginia Residential Thermostat Rewards Program Monthly Indicator Tables

Category	Measure	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2020-2024 Total	
O&M (\$)	Direct Rebate		\$1,403	\$2,199	\$2,845	\$2,351	\$2,637	\$2,552	\$1,418	\$3,158	\$1,924	\$2,022	\$2,170	\$23,057	\$47,737	\$85,843	
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Direct EM&V		\$33,601	\$52,663	\$68,129	\$56,316	\$63,163	\$61,119	\$33,956	\$33,956	\$75,644	\$46,089	\$48,423	\$51,975	\$552,215	\$1,143,292	\$1,964,678
	Indirect Other (Administrative)		\$159,576	\$159,576	\$159,576	\$159,576	\$159,576	\$159,576	\$159,576	\$159,576	\$159,576	\$159,576	\$159,576	\$159,576	\$159,576	\$1,914,911	\$3,807,405
	Capital (\$)		-\$125,975	-\$106,913	-\$91,447	-\$103,260	-\$96,412	-\$98,457	-\$125,620	-\$125,620	-\$83,932	-\$113,486	-\$111,153	-\$107,601	\$392,639	-\$771,619	-\$1,842,725
	Costs (\$)		1.8%	4.5%	8.1%	11.0%	14.3%	17.5%	19.3%	19.3%	23.2%	25.6%	28.2%	30.9%	59.7%	60%	52%
	Participants ¹	Total (Cumulative @ End of Month)		6,903	7,305	7,690	8,165	8,623	9,301	10,079	10,490	11,354	11,863	12,502	13,084	13,084	13,084
		Removals (Uninstalled) / Deactivations		1,071	1,115	1,201	1,339	1,522	1,711	1,931	2,061	2,089	2,130	2,437	2,474	2,474	2,474
		Opt-outs		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Adjusted Participants (Cum.)		5,832	6,190	6,489	6,826	7,101	7,590	8,148	8,429	9,265	9,733	10,065	10,610	10,610	10,610
	Net Participation (Cum.)		5,832	6,190	6,489	6,826	7,101	7,590	8,148	8,429	9,265	9,733	10,065	10,610	10,610	10,610	
	Planned (Cum.)		19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	19,433.0	
	Variance (Cum.)		-13,601.0	-13,243.0	-12,944.0	-12,607.0	-12,332.0	-11,843.0	-11,285.0	-11,004.0	-10,168.0	-9,700.0	-9,368.0	-8,823.0	-8,232.0	-8,232.0	
	Cum % toward planned total (Net basis)		30.0%	31.9%	33.4%	35.1%	36.5%	39.1%	41.9%	43.4%	47.7%	50.1%	51.8%	54.6%	54.6%	54.6%	
	Removal (Uninstalled) / Deactivation Rate		1.53%	0.71%	1.33%	2.02%	2.58%	2.49%	2.70%	1.54%	0.30%	0.42%	3.05%	0.35%	1.58%	2.33%	
	Average % Opt-outs (rate)		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	Ex-Ante Estimated kW		0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Summer kW Potential	Summer Peak Shaving Potential kW - Gross Participants		6,489	6,867	7,229	7,675	8,106	8,743	9,474	9,861	10,673	11,151	11,752	12,299	12,299	13,796	
	Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW		1,007	1,048	1,129	1,259	1,431	1,608	1,815	1,937	1,964	2,002	2,291	2,326	2,326	2,326	
	Dispatchable Summer Peak Shaving Potential - Total kW		5,482	5,819	6,100	6,416	6,675	7,135	7,659	7,923	8,709	9,149	9,461	9,461	9,973	11,471	
	Realization Rate Weighted by Measure		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	Adjustment for Realization Rate		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net Summer Demand (Cum.)		5,482	5,819	6,100	6,416	6,675	7,135	7,659	7,923	8,709	9,149	9,461	9,461	9,973	11,471	
	Planned Summer Demand (Cum.)		30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	30,898.5	
	Cum. % toward planned total (Net basis)		17.74%	18.83%	19.74%	20.77%	21.60%	23.09%	24.79%	25.64%	28.19%	29.61%	29.61%	30.62%	32.28%	37.12%	
	Dispatchable Summer Peak Shaving Potential kW per Participant		0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Program Performance	Cum. \$Admin. per Participant (Gross)		\$6	\$6	\$6	\$6	\$6	\$6	\$5	\$5	\$5	\$5	\$5	\$7	\$7	\$7	
	Cum. \$Admin. per kW (Gross)		\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$7	\$7	\$7	
	Cum. \$EM&V per \$Total		12.7%	14.0%	16.4%	17.6%	18.7%	20.0%	19.5%	21.4%	21.6%	21.9%	22.8%	16.4%	16.4%	16.4%	
	Cum. \$Rebate per Participant (Gross)		\$20	\$19	\$18	\$17	\$16	\$15	\$13	\$13	\$12	\$11	\$11	\$25	\$25	\$25	



O.36.3 2020–2022 Virginia Residential Thermostat Rewards Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Thermostat Rewards	2019	VA	PUR-2019-00201	6.67	4.5	5.95	4.5
Residential Thermostat Rewards	2020	VA	PUR-2020-00274	N/A	N/A	N/A	N/A
Residential Thermostat Rewards	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Thermostat Rewards	2022	VA	PUR-2022-00210	10.38	1.4	1.8	1.34
Residential Thermostat Rewards	2023	VA	EM&V Report	9.37	0.47	0.59	0.46



O.37 Virginia Residential Water Savings Demand Response Program 2021-2022

O.37.1 2021-2022 Virginia Residential Water Savings Demand Response Program Annual Indicator Tables

VA - Residential Water Savings Demand Response Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$430	\$6,254	\$6,684
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$9,167	\$149,786	\$158,953
Costs (\$)		Planned	\$0	\$343,042	\$343,042
Costs (\$)		Variance	\$9,167	-\$193,256	-\$184,089
		Annual % of Planned	N/A	44%	46%
Participants ¹		Total (Cumulative @ End of Month)	0	0	0
		Removals (Uninstalled) / Deactivations	0	0	0
		Opt-outs	0	0	0
		Adjusted Participants (Cum.)	0	0	0
		Net Participation (Cum.)	0	0	0
		Planned (Cum.)	0.0	625.0	625.0
		Variance (Cum.)	0.0	-625.0	-625.0
		Cum % toward planned total (Net basis)	N/A	0.0%	0.0%
		Removal (Uninstalled) / Deactivation Rate	N/A	N/A	
		Average % Opt-outs (rate)	0.00%	0.00%	0.00%
		Ex-Ante Estimated kW	0.00	0.00	0.00
Summer kW Potential		Summer Peak Shaving Potential kW - Gross Participants	0	0	0
		Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW	0	0	0
		Dispatchable Summer Peak Shaving Potential - Total kW	0	0	0
		Realization Rate Weighted by Measure	100.0%	100.0%	100.0%
		Adjustment for Realization Rate	0	0	0
		Net Summer Demand (Cum.)	0	0	0
		Planned Summer Demand (Cum.)	0	325	325
		Cum. % toward planned total (Net basis)	N/A	0.00%	0.00%
		Dispatchable Summer Peak Shaving Potential kW per Participant	0.00	0.00	0.00
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	41.6%	8.3%	8.3%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A



O.37.2 2021-2022 Virginia Residential Water Savings Demand Response Program Benefit Cost Scores

Program Name	Filing Year	State	Filing Case No	PCT	UTC	TRC	RIM
Residential Water Savings Demand Response	2020	VA	PUR-2020-00274	4.99	1.79	1.6	0.33
Residential Water Savings Demand Response	2021	VA	PUR-2021-00247	N/A	N/A	N/A	N/A
Residential Water Savings Demand Response	2022	VA	PUR-2022-00210	N/A	N/A	N/A	N/A
Residential Water Savings Demand Response	2023	VA	EM&V Report	N/A	N/A	N/A	N/A



O.38 Virginia Non-Residential Income and Age Qualifying Program 2022

O.38.1 2022 Virginia Non-Residential Income and Age Qualifying Program Monthly Indicator Tables

VA - Non-Residential Income and Age Qualifying Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
O&M (\$)		Direct Rebate													
O&M (\$)		Direct Implementation													
O&M (\$)		Direct EM&V													
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2	\$83	\$103	\$0	\$188
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42	\$1,978	\$2,475	\$0	\$4,495
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42	\$1,978	\$2,475	\$0	\$4,495
		Annual % of Planned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned	0	0	0	0	0	0	0	0	0	0	0	0	0
		Variance	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual % of Planned (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned Net Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual % Toward Planned Net Savings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Annual % Toward Planned Net Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0%	93.9%	94.9%	94.9%	94.9%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



O.39 Virginia Non-Residential Small Business Behavioral Program 2022

O.39.1 2022 Virginia Non-Residential Small Business Behavioral Program Monthly Indicator Tables

VA - Non-Residential Small Business Behavioral Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	
O&M (\$)		Direct Rebate														
O&M (\$)		Direct Implementation														
O&M (\$)		Direct EM&V														
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39	\$45	\$10	\$94	
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$931	\$1,079	\$233	\$2,244	
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$931	\$1,079	\$233	\$2,244	
		Annual % of Planned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Planned	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Annual % of Planned (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Planned Net Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Annual % Toward Planned Net Savings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Planned Net Savings (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Annual % Toward Planned Net Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	95.8%	66.2%	59.3%	59.3%	
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	



O.40 Virginia Residential Income and Age Qualifying Home Improvement Enhanced Program 2022

O.40.1 2022 Virginia Residential Income and Age Qualifying Home Improvement Enhanced Program Monthly Indicator Tables

VA - Residential Income and Age Qualifying Energy Efficiency Program	Indicator	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2021-2022	
Category	Measure	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	Total	Total	
OSM (\$)	Direct Rebate																	
OSM (\$)	Direct Implementation																	
OSM (\$)	Indirect Other (Administrative)																	
Capital (\$)	Direct Implementation	\$84	\$514	\$420	\$165	\$44,279	\$55,920	\$15,559	\$16,733	\$15,034	\$20,498	\$35,921	\$39,264	\$244,390	\$244,390	\$245,126	\$0	\$0
Costs (\$)	Total	\$2,001	\$12,319	\$10,058	\$3,942	\$1,080,486	\$1,339,277	\$372,631	\$400,762	\$390,058	\$490,923	\$690,305	\$940,366	\$5,853,130	\$5,853,130	\$5,868,826	\$0	\$0
Costs (\$)	Planned	\$644,677	\$644,677	\$644,677	\$644,677	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$606,010	\$7,426,787	\$7,426,787
Costs (\$)	Variance	-\$642,676	-\$632,358	-\$634,619	-\$640,735	-\$454,477	-\$733,268	-\$233,379	-\$205,952	-\$119,037	\$245,952	-\$119,037	\$254,295	\$534,356	\$1,573,657	\$1,573,657	-\$1,557,861	79%
	Annual % of Planned	0.0%	0.2%	0.3%	0.4%	14.7%	32.7%	37.7%	43.1%	48.0%	54.6%	66.1%	76.8%	79%	79%			
Participants*	Total (Gross)	0	0	0	0	461	1,172	166	273	314	420	350	1,626	4,782	4,782	4,782	0	0
	Planned	814	810	810	810	810	810	810	810	810	810	810	810	810	810	810	9,724	9,724
	Variance	-814	-810	-810	-810	-348	-644	-644	-537	-496	-590	-460	-186	-4,942	-4,942	-4,942		
	Annual % of Planned (Gross)	0%	0%	0%	0%	5%	17%	19%	21%	29%	32%	29%	49%	49%	49%	49%		
Installed kWh/year	Total	0	0	0	0	526,090	874,707	152,344	212,629	220,884	221,355	482,989	425,202	3,096,191	3,096,191	3,096,191	0	0
	Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0	0
	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	526,090	874,707	152,344	212,629	220,884	221,355	482,989	425,202	3,096,191	3,096,191	3,096,191	0	0
	Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
	Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	-105,216	-174,941	-30,469	-42,526	-44,177	-44,271	-92,598	-85,040	-619,238	-619,238	-619,238	0	0
	Planned Net Savings (kWh/yr)	42,979	42,768	42,768	42,768	420,864	699,766	121,875	170,103	176,707	177,094	370,391	340,162	2,476,953	2,476,953	2,476,953	0	0
	Annual % Toward Planned Net Savings	0%	0%	0%	0%	82.0%	218.3%	242.0%	275.1%	309.6%	344.0%	416.2%	482.4%	482.4%	482.4%	482.4%	0	0
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	1,141	748	918	779	709	527	1,323	262	647	647	647	0	0
	Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	913	597	734	623	563	422	1,056	209	518	518	518	0	0
Installed Summer peak kW Total	Total	0.0	0.0	0.0	0.0	123.6	188.8	34.4	43.3	56.6	69.1	110.0	63.5	689.3	689.3	689.3	0	0
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0	0
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	123.6	188.8	34.4	43.3	56.6	69.1	110.0	63.5	689.3	689.3	689.3	0	0
	Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
	Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	-24.7	-37.8	-6.9	-8.7	-11.3	-13.8	-22.0	-12.7	-137.9	-137.9	-137.9	0	0
	Planned Net Savings (kW)	11.1	11.0	11.0	11.0	98.9	151.0	27.5	34.7	45.3	55.3	86.0	50.8	591.5	591.5	591.5	0	0
	Annual % Toward Planned Net Reduction	0%	0%	0%	0%	74.9%	189.3%	210.1%	236.4%	270.7%	312.6%	379.2%	417.7%	417.7%	417.7%	417.7%	0	0
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	0.27	0.16	0.21	0.16	0.16	0.16	0.16	0.16	0.31	0.31	0.31	0.04	0.1
	Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.03	0.1	0.1	0.1	0.1
Installed Winter peak kW Total	Total	-	-	-	-	318.9	530.1	106.8	119.6	108.3	88.7	300.8	140.6	1,713.7	1,713.7	1,713.7	0	0
	Realization Rate Weighted by Measure	-	-	-	-	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0	0
	Realization Rate Adjustment (kW)	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
	Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	318.9	530.1	106.8	119.6	108.3	88.7	300.8	140.6	1,713.7	1,713.7	1,713.7	0	0
	Net-To-Gross Rate Weighted by Measure	-	-	-	-	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
	Net-To-Gross Adjustment (kW)	-	-	-	-	-63.8	-106.0	-21.4	-23.9	-21.7	-17.7	-60.2	-28.1	-342.7	-342.7	-342.7	0	0
	Planned Net Savings (kW)	-	-	-	-	255.1	424.1	85.4	95.7	86.6	70.9	240.6	112.5	1,371.0	1,371.0	1,371.0	0	0
	Annual % Toward Planned Net Reduction	-	-	-	-	86.9%	231.3%	260.4%	293.0%	322.6%	346.7%	428.7%	467.0%	467.0%	467.0%	467.0%	0	0
	Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	0.7	0.5	0.6	0.4	0.3	0.2	0.9	0.09	0.4	0.4	0.4	0.4	0.4
	Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	0.6	0.4	0.5	0.4	0.3	0.2	0.7	0.07	0.3	0.3	0.3	0.3	0.3
Program Performance	Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	\$100	\$65	\$65	\$65	\$65	\$65	\$65	\$65	\$51	\$51	\$51	\$51	\$51
	Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	\$0.09	\$0.07	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08
	Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	\$374	\$277	\$338	\$338	\$338	\$338	\$338	\$338	\$356	\$356	\$356	\$356	\$356
	Cum. \$Rebate per \$ Total	60.5%	69.7%	72.5%	73.6%	3.2%	1.7%	1.4%	2.0%	2.2%	2.4%	2.2%	2.4%	2.0%	2.0%	2.0%	2.0%	2.0%
	Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	\$1,597	\$1,104	\$1,138	\$1,097	\$1,063	\$1,053	\$917	\$917	\$917	\$917	\$917	\$917	\$917



O.41 Virginia Residential Income and Age Qualifying Target Report Program 2022

O.41.1 2022 Virginia Residential Income and Age Qualifying Target Report Program Monthly Indicator Tables

VA - Residential Income and Age Qualifying Target Report Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	
O&M (\$)		Direct Rebate														
O&M (\$)		Direct Implementation														
O&M (\$)		Direct EM&V														
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84	\$49	\$13	\$146	
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,001	\$1,170	\$316	\$3,487	
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,001	\$1,170	\$316	\$3,487	
		Annual % of Planned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Planned	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Annual % of Planned (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Planned Net Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Annual % Toward Planned Net Savings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Planned Net Savings (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Annual % Toward Planned Net Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	95.8%	74.5%	67.7%	67.7%	
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	



O.42 Virginia Non-Residential Data Center Program 2022

O.42.1 2022 Virginia Non-Residential Data Center Program Monthly Indicator Tables

VA - Non-Residential Data Center Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	
O&M (\$)		Direct Rebate														
O&M (\$)		Direct Implementation														
O&M (\$)		Direct EM&V														
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10	\$413	\$151	\$0	\$573	
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$228	\$9,892	\$3,605	\$0	\$13,725	
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$228	\$9,892	\$3,605	\$0	\$0	\$13,725	
		Annual % of Planned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Planned	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Annual % of Planned (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Planned Net Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Annual % Toward Planned Net Savings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Planned Net Savings (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Annual % Toward Planned Net Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0%	93.7%	94.2%	94.2%	94.2%	
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	



O.43 Virginia Non-Residential Healthcare Program 2022

O.43.1 2022 Virginia Non-Residential Healthcare Program Monthly Indicator Tables

VA - Non-Residential Healthcare Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total			
O&M (\$)		Direct Rebate																
O&M (\$)		Direct Implementation																
O&M (\$)		Direct EM&V																
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$86	\$36	\$4	\$126			
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,058	\$858	\$93	\$3,009			
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,058	\$858	\$93	\$3,009			
		Annual % of Planned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Planned	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Variance	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Annual % of Planned (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Planned Net Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Annual % Toward Planned Net Savings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Planned Net Savings (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Annual % Toward Planned Net Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	95.8%	93.5%	90.6%	90.6%		
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			



O.44 Virginia Non-Residential Hotel and Lodging 2022

O.44.1 2022 Virginia Non-Residential Hotel and Lodging Program Monthly Indicator Tables

VA - Non-Residential Hotel and Lodging Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total			
O&M (\$)		Direct Rebate																
O&M (\$)		Direct Implementation																
O&M (\$)		Direct EM&V																
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2	\$90	\$52	\$4	\$147			
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42	\$2,147	\$1,234	\$93	\$3,516			
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42	\$2,147	\$1,234	\$93	\$3,516			
		Annual % of Planned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Planned	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Variance	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Annual % of Planned (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Planned Net Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Annual % Toward Planned Net Savings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Planned Net Savings (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Annual % Toward Planned Net Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-			
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0%	94.0%	92.7%	90.2%	90.2%			
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			



O.46 Virginia Voltage Optimization Program 202

O.46.1 2022 Monthly Indicator Tables Virginia Voltage Optimization Program

VA - Voltage Optimization Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
O&M (\$)		Direct Rebate													
O&M (\$)		Direct Implementation													
O&M (\$)		Direct EM&V													
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$444	\$392	\$523	\$3	\$1,362
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,628	\$9,399	\$12,527	\$71	\$32,625
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$810,904	\$810,904	\$810,904	\$2,432,712
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,628	-\$801,505	-\$798,376	-\$810,833	-\$2,400,086
		Annual % of Planned	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.8%	1.3%	1.3%	1%
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned	0	0	0	0	0	0	0	0	0	0	0	0	0
		Variance	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual % of Planned (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned Net Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual % Toward Planned Net Savings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Annual % Toward Planned Net Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	95.8%	95.5%	95.6%	95.4%	95.4%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



O.47 Virginia Residential Lighting Program 2010–2012

VA- Residential Lighting Program		2010	2011	2012	2010-2012
Category	Indicator	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate				
O&M (\$)	Direct Implementation				
O&M (\$)	Direct EM&V				
O&M (\$)	Indirect Other (Administrative)	\$857,229	\$297,373	\$3,259	\$1,157,861
Costs (\$)	Total	\$3,572,757	\$3,608,825	\$41,017	\$7,222,598
Costs (\$)	Planned	\$5,343,451	\$4,151,099	\$64,063	\$9,558,613
Costs (\$)	Variance	-\$1,770,694	-\$542,275	-\$23,046	-\$2,336,015
	Cum. % toward planned total	66.9%	86.9%	64.0%	75.6%
Participants	Total bulbs (Gross)	2,016,479	2,206,030	0	4,222,509
	Planned (Gross)	2,013,600	2,001,784	0	4,015,384
	Variance	2,879	204,246	0	207,125
	Cum % toward planned total (Gross)	100.1%	110.2%	0.0%	105.2%
kWh	Total Gross Deemed Savings	101,640,578	116,730,747	0	218,371,325
84%	Realization Rate Adjustment	-16,262,492	-18,676,920	0	-34,939,412
	Adjusted Gross Savings	85,378,086	98,053,827	0	183,431,913
65%	Net-To-Gross Adjustment	-29,882,330	-34,318,840	0	-64,201,170
	Net Adjusted Savings	55,495,756	63,734,988	0	119,230,743
	Planned Savings (Net)	53,544,280	53,229,979	0	106,774,259
	Cum. % Toward Planned Savings (Net)	103.6%	119.7%	0.0%	111.7%
	Avg. Savings Per Participant (Net)	28	29	0	28
kW	Total Gross Deemed Demand	11,056	12,700	0	23,756
84%	Realization Rate Adjustment	-1,769	-2,032	0	-3,801
	Adjusted Gross Demand	9,287	10,668	0	19,955
65%	Net-To-Gross Adjustment	-3,250	-3,734	0	-6,984
	Net Adjusted Demand	6,037	6,934	0	12,971
	Planned Demand (Net)	4,685	4,657	0	9,342
	Cum. % Toward Planned Demand (Net)	128.8%	148.9%	0.0%	138.8%
	Avg. Demand Per Participant (Net)	0.003	0.003	0.000	0.003
Program Performance	Cum. \$Admin. per Cum. Bulb (Gross)	\$0.4	\$0.1		\$0.3
	Cum. \$Admin. per Cum. kWh (Gross)	\$0.008	\$0.00		\$0.005
	Cum. \$Admin. per Cum. kW (Gross)	\$78	\$23		\$49
	Cum. \$EM&V per Cum Total Costs (\$)	0.7%	3.5%	89.1%	2.6%
	Cum. \$Rebate per Cum. Bulb (Gross)	\$0.78	\$1.00		\$0.90

1. Program closed end of 2012



O.48 Virginia Residential Low-income Program 2010–2014

VA- Residential Low-income Program Category	Indicator	2010* Total	2011* Total	2012 Total	2013 Total	2014 Total	2010-2014 Program Total
O&M(\$)	Direct Rebate						
O&M(\$)	Direct Implementation						
O&M(\$)	Direct EM&V						
O&M(\$)	Indirect Other (Administrative)	\$825,883	\$386,039	\$388,331	\$273,011	\$126,173	\$1,999,436
Capital (\$)		\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total	\$2,698,543	\$4,799,288	\$3,363,405	\$2,600,289	\$2,432,463	\$15,893,988
Costs (\$)	Planned	\$3,409,892	\$6,679,625	\$10,513,733	\$3,566,022	\$2,975,592	\$27,144,863
Costs (\$)	Variance	-\$711,349	-\$1,880,337	-\$7,150,328	-\$965,733	-\$543,128	-\$11,250,875
	Cum. % toward planned total	79.1%	71.8%	32.0%	72.9%	81.7%	58.6%
Participants	Total (Gross)	1,431	3,913	2,380	1,883	1,880	11,487
	Planned (Gross)	1,414	3,789	6,062	2,467	1,872	15,604
	Variance	17	124	-3,682	-584	8	-4,117
	Cum. % toward planned total (Gross)	101.2%	103.3%	39.3%	76.3%	100.4%	73.6%
Installed kWh/year	Total Gross Deemed Savings	1,743,349	4,490,516	2,596,580	1,668,643	1,740,993	12,240,081
62%	Realization Rate Adjustment	-923,975	-2,379,974	-1,376,187	-417,161	-661,377	-5,758,874
	Adjusted Gross Savings	819,374	2,110,543	1,220,392	1,251,482	1,079,416	6,481,207
93.6%	Net-To-Gross Adjustment	-52,440	-135,075	-78,105	-80,095	-69,083	-414,797
	Net Adjusted Savings	766,934	1,975,468	1,142,287	1,171,388	1,010,333	6,066,410
	Planned Savings (Net)	554,704	554,704	554,704	554,704	1,560,401	3,779,217
	Cum. % Toward Planned Savings (Net)	138.3%	356.1%	205.9%	211.2%	64.7%	160.5%
	Avg. Savings Per Participant (Net)	536	505	480	622	537	528
Installed kW	Total Gross Deemed Demand	691	1,443	508	346	336	3,323
62%	Realization Rate Adjustment	-366.4	-764.7	-269.3	-86.4	-127.6	-1,614
	Adjusted Gross Demand	325	678	239	259	208	1,709
93.6%	Net-To-Gross Adjustment	-21	-43	-15	-17	-13	-109
	Net Adjusted Demand	304	635	223	243	195	1,600
	Planned (Net)	102	274	436	396	246	1,454
	Cum. % toward planned total (Net)	298.1%	231.6%	51.3%	61.3%	79.3%	110.1%
	Avg. per Participant (Net)	0.0	0.2	0.1	0.1	0.1	0.1
Program Performance	Cum. \$ Admin. per Cum. Participant (Gross)	\$577	\$99	\$163	\$145	\$67	\$174
	Cum. \$ Admin. per Cum. kWh (Gross)	\$0.5	\$0.1	\$0.1	\$0.2	\$0.1	\$0.2
	Cum. \$ Admin. per Cum. kW (Gross)	\$1,195	\$268	\$764	\$790	\$376	\$602
	Cum. \$ EM&V per Cum Total Costs (\$)	1.0%	3.2%	3.2%	4.0%	3.4%	3.0%
	Cum. \$ Rebate per Cum. Participant (Gross)	\$1,086	\$1,019	\$1,065	\$1,016	\$951	\$1,025.22

1. Program closed end of 2014.



O.49 Virginia Residential Heat Pump Tune-Up Program 2012-2017

VA - Residential Heat Pump Tune Up Program Category	Indicator	2012 Total	2013 Total	2014 Total	2015 Total	2016 Total	2017 Total	2012 - 2017 Program Total
O&M(\$)	Direct Rebate							
O&M(\$)	Direct Implementation							
O&M(\$)	Direct EM&Y							
O&M(\$)	Indirect Other (Administrative)	\$179,541	\$339,952	\$229,172	\$124,325	\$103,917	\$26,250	\$1,003,156
Costs (\$)	Total	\$1,570,652	\$3,220,440	\$4,388,028	\$3,953,516	\$3,419,197	\$667,118	\$17,218,951
Costs (\$)	Planned	\$2,601,223	\$4,655,778	\$6,022,741	\$6,579,027	\$6,868,318	\$847,759	\$27,574,846
Costs (\$)	Variance	-\$1,030,571	-\$1,435,338	-\$1,634,713	-\$2,625,511	-\$3,449,121	-\$180,641	-\$10,355,894
	Annual % of Planned	60%	69%	73%	60%	50%	79%	62%
Participants ¹	Total (Gross)	1,209	15,636	24,687	24,114	19,008	2,472	87,126
	Planned (Gross)	10,203	27,830	42,293	42,293	22,958	0	145,577
	Variance	-8,994	-12,194	-17,606	-18,179	-3,950	2,472	-58,451
	Annual % of Planned (Gross)	12%	56%	58%	57%	83%		60%
Installed kW/year	Total Gross Deemed Savings (kW/h/yr)	364,856	4,605,801	6,269,989	5,067,124	4,035,338	500,799	20,843,906
99%	Realization Rate Adjustment (kW/h/yr)	-2,919	-36,846	-50,160	-40,537	-32,283	-4,006	-166,751
	Realization Rate Adjusted Savings (kW/h/yr)	361,937	4,568,954	6,219,829	5,026,587	4,003,055	496,793	20,677,155
90%	Net-To-Gross Adjustment (kW/h/yr)	-36,194	-456,895	-621,983	-502,659	-400,306	-49,679	-2,067,715
	Net Adjusted Savings (kW/h/yr)	325,743	4,112,059	5,597,846	4,523,928	3,602,750	447,114	18,609,439
	Planned Net Savings (kW/h/yr)	7,024,000	19,102,880	32,227,266	32,227,266	2,595,483	0	93,176,895
	Annual % Toward Planned Net Savings (kW/h)	5%	22%	17%	14%	139%		20%
	Avg. Gross Savings Per Participant (kW/h/yr)	302	295	254	210	212	203	239
	Avg. Net Savings Per Participant (kW/h/yr)	269	263	227	188	190	181	214
Installed kW	Total Gross Demand Reduction (kW)	250	3,160	3,198	5,435	3,003	391	15,437
99%	Realization Rate Adjustment (kW)	-2	-25	-26	-43	-24	-3	-123
	Realization Rate Adjusted Gross Demand Reduction (kW)	248	3,135	3,173	5,392	2,979	387	15,313
90%	Net-To-Gross Adjustment (kW)	-25	-314	-317	-539	-298	-39	-1,531
	Net Adjusted Demand Reduction (kW)	223	2,822	2,855	4,852	2,681	349	13,782
	Planned Net Demand Reduction (kW)	2,053	5,585	9,727	9,727	869	0	27,962
	Annual % Toward Planned Net Reduction (kW)	11%	51%	29%	50%	309%		49%
	Avg. Gross Demand Reduction Per Participant (kW)	0.21	0.20	0.13	0.23	0.16	0.16	0.18
	Avg. Net Demand Reduction Per Participant (kW)	0.18	0.18	0.12	0.20	0.14	0.14	0.16
Program Performance	Annual S.Admin. per Participant (Gross)	\$149	\$22	\$9	\$5	\$5	\$11	\$12
	Annual S.Admin. per kW/year (Gross)	\$0.49	\$0.07	\$0.04	\$0.02	\$0.03	\$0.05	\$0.05
	Annual S.Admin. per kW (Gross)	\$719	\$108	\$72	\$23	\$35	\$67	\$65
	Annual SE/E&Y per \$ Total	1%	3%	2%	2%	3%	10%	3%
	Annual S/Relate per Participant (Gross)	\$90	\$90	\$90	\$90	\$91	\$90	\$90

1. Program closed end of 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated



O.50 Virginia Residential Heat Pump Upgrade Program 2012-2017

Category	Indicator	2012 Total	2013 Total	2014 Total	2015 Total	2016 Total	2017 Total	2012-2017 Program Total
O&M (\$)	Direct Rebate	\$12,604.9	\$202,451	\$101,388	\$76,038	\$78,750	\$29,454	\$614,131
O&M (\$)	Direct Implementation	\$1,146,122	\$2,046,264	\$1,894,946	\$2,465,610	\$2,591,140	\$748,544	\$10,892,625
O&M (\$)	Direct EM&V	\$2,219,762	\$4,060,927	\$5,335,095	\$5,744,102	\$6,313,961	\$526,009	\$24,199,946
O&M (\$)	Indirect Other (Administrative)	-\$1,073,640	-\$2,014,663	-\$3,440,149	-\$3,278,493	-\$3,722,821	\$222,445	-\$13,307,321
	Annual % of Planned	52%	50%	36%	43%	41%	142%	45%
Participants ¹	Total (Gross)	86	3,295	3,649	4,210	5,395	1,149	17,784
	Planned (Gross)	4396	11,992	18,221	18,221	3,748	0	56,578
	Variance	-4310	-8,697	-14,572	-14,011	1,647	1,149	-38,794
	Annual % of Planned (Gross)	2%	27%	20%	23%	144%	31%	31%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	199,447	6,665,695	5,667,002	2,405,953	3,072,240	553,935	18,564,272
	Realization Rate Adjustment (kWh/yr)	13,363	446,602	379,689	-538,933	-688,182	-124,081	-511,543
78%	Realization Rate Adjusted Savings (kWh/yr)	212,810	7,112,296	6,046,691	1,867,020	2,384,058	429,854	18,052,729
45%	Net-To-Gross Adjustment (kWh/yr)	-31,922	-1,066,844	-907,004	-1,024,994	-1,308,848	-235,990	-4,575,601
	Net Adjusted Savings (kWh/yr)	180,889	6,045,452	5,139,687	842,026	1,075,210	193,864	13,477,128
	Planned Net Savings (kWh/yr)	3,207,000	8,724,528	15,761,165	15,761,165	7,423,16	0	44,196,174
	Annual % Toward Planned Net Savings (kWh)	6%	69%	33%	5%	145%		30%
	Avg. Gross Savings Per Participant (kWh/yr)	2,319	2,023	1,553	571	569	482	1,044
	Avg. Net Savings Per Participant (kWh/yr)	2,103	1,835	1,409	200	199	169	758
Installed kW	Total Gross Demand Reduction (kW)	59	2,394	2,169	472	624	130	5,848
89%	Realization Rate Adjustment (kW)	-10	-405	-367	-53	-70	-15	-918
	Realization Rate Adjusted Gross Demand Reduction (kW)	49	1,989	1,802	419	554	115	4,930
45%	Net-To-Gross Adjustment (kW)	-7	-298	-270	-230	-304	-63	-1,174
	Net Adjusted Demand Reduction (kW)	42	1,691	1,532	189	250	52	3,756
	Planned Net Demand Reduction (kW)	1,068	2,904	5,284	5,284	2,67	0	14,807
	Annual % Toward Planned Net Reduction (kW)	4%	58%	29%	4%	94%		25%
	Avg. Gross Demand Reduction Per Participant (kW)	0.69	0.73	0.59	0.11	0.12	0.11	0.33
	Avg. Net Demand Reduction Per Participant (kW)	0.49	0.51	0.42	0.04	0.05	0.05	0.21
Program Performance	Annual \$ Admin. per Participant (Gross)	\$1,466	\$61	\$28	\$18	\$15	\$26	\$35
	Annual \$ Admin. per kWh/year (Gross)	\$0.63	\$0.03	\$0.02	\$0.03	\$0.03	\$0.05	\$0.03
	Annual \$ Admin. per kW (Gross)	\$2,125	\$85	\$47	\$161	\$126	\$227	\$105
	Annual \$ EM&V per \$ Total	1.6%	15.1%	13.5%	18.5%	11.0%	18.8%	13.4%
	Annual \$ Rebate per Participant (Gross)	\$219	\$218	\$217	\$219	\$218	\$218	\$218

1. Program closed end of 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.
3. Realization Rate Adjustment occurred in 2015. Prior to 2012-2014 kWh realization rate was 106.7%, kW realization rate was 83.1%, and Net to Gross rate was 85%. From the start of 2015 forward kWh realization rate was 78%, kW realization rate was 89%, and Net to Gross rate was 45%.



O.51 Virginia Residential Duct Sealing Program 2012-2017

V.A - Residential Duct Sealing Program		Indicator	2012 Total	2013 Total	2014 Total	2015 Total	2016 Total	2017 Total	2012 - 2017 Program Total
O&M(\$)	Direct Relate		\$107,619	\$88,535	\$47,393	\$29,028	\$21,206	\$12,428	\$306,208
O&M(\$)	Direct Implementation		\$898,451	\$868,778	\$995,573	\$932,972	\$697,755	\$315,834	\$4,709,363
O&M(\$)	Direct EM&V		\$1,078,863	\$1,517,606	\$1,760,434	\$1,656,434	\$1,765,492	\$287,296	\$8,066,125
O&M(\$)	Indirect Other (Administrative)		-\$180,412	-\$648,828	-\$764,961	-\$723,462	-\$1,067,737	\$28,538	-\$3,356,761
	Annual % of Planned		83%	57%	57%	56%	40%	109.9%	58.4%
Costs (\$)	Total		\$898,451	\$868,778	\$995,573	\$932,972	\$697,755	\$315,834	\$4,709,363
Costs (\$)	Planned		\$1,078,863	\$1,517,606	\$1,760,434	\$1,656,434	\$1,765,492	\$287,296	\$8,066,125
Costs (\$)	Variance		-\$180,412	-\$648,828	-\$764,961	-\$723,462	-\$1,067,737	\$28,538	-\$3,356,761
	Annual % of Planned		83%	57%	57%	56%	40%	109.9%	58.4%
Participants ¹	Total (Gross)	8							
	Planned (Gross)	1,267							
	Variance	-1,259							
	Annual % of Planned (Gross)	1%							
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	10,093	120,772	264,570	1,024,299	369,325	145,638	1,934,698	
49%	Realization Rate Adjustment (kWh/yr)	-5,107	-61,111	-133,872	-518,295	-186,879	-73,693	-978,957	
80%	Net To-Gross Adjustment (kWh/yr)	4,986	59,661	130,697	506,004	182,447	71,945	955,741	
	Net To-Gross Adjustment (kWh/yr)	-997	-11,932	-26,139	-101,201	-36,489	-14,389	-191,148	
	Net Adjusted Savings (kWh/yr)	3,989	47,729	104,558	404,803	145,957	57,556	764,592	
	Planned Net Savings (kWh/yr)	533,000	1,449,268	2,750,476	2,750,476	1,78,861	82%	0	7,662,081
	Annual % Toward Planned Net Savings (kWh)	1%	3%	4%	15%	8%	10%	10%	10%
	Avg. Gross Savings Per Participant (kWh/yr)	1,262	1,118	660	551	561	552	586	586
	Avg. Net Savings Per Participant (kWh/yr)	499	442	261	218	222	218	232	232
Installed kW	Total Gross Demand Reduction (kW)	12	138	217	839	302	119	1,627	
43%	Realization Rate Adjustment (kW)	-7	-79	-125	-483	-174	-69	-936	
	Net To-Gross Adjustment (kW)	5	59	92	357	129	51	692	
80%	Net To-Gross Adjustment (kW)	-1	-12	-18	-71	-26	-10	-138	
	Net Adjusted Demand Reduction (kW)	4	47	74	285	103	41	553	
	Planned Net Demand Reduction (kW)	330	898	1,732	1,732	60	0	4,752	
	Annual % Toward Planned Net Reduction (kW)	1%	5%	4%	16%	172%	0	12%	
	Avg. Gross Demand Reduction Per Participant (kW)	1.45	1.28	0.54	0.45	0.46	0.45	0.49	
	Avg. Net Demand Reduction Per Participant (kW)	0.49	0.43	0.18	0.15	0.16	0.15	0.17	
Program Performance	Annual S.Admin. per Participant (Gross)		\$13,452	\$820	\$118	\$16	\$32	\$47	\$93
	Annual S.Admin. per kWh/year (Gross)		\$10.66	\$0.7	\$0.2	\$0.03	\$0.06	\$0.09	\$0.16
	Annual S.Admin. per kW (Gross)		\$9,287	\$642	\$219	\$97	\$70	\$104	\$188
	Annual SE&V per \$Total		2.1%	13.5%	18.6%	15.0%	15.4%	21.1%	12.0%
	Annual \$Rebate per Participant (Gross)		\$125	\$125	\$133	\$126	\$125	\$125	\$125

1. Program closed end of 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.



O.52 Virginia Residential Home Energy Check-Up Program 2012-2017

VA - Residential Home Energy Check-Up Program		2012	2013	2014	2015	2016	2017	2012 - 2017
Category	Indicator	Total	Total	Total	Total	Total	Total ¹	Program Total
O&M (\$)	Direct Rebate							
O&M (\$)	Direct Implementation							
O&M (\$)	Direct EM&V							
O&M (\$)	Indirect Other (Administrative)							
Costs (\$)	Total	\$45,900	\$107,979	\$302,076	\$142,892	\$152,251	\$27,969	\$779,066
Costs (\$)	Planned	\$388,827	\$1,139,455	\$6,664,393	\$4,530,926	\$5,009,540	\$710,794	\$18,443,934
Costs (\$)	Variance	\$579,767	\$1,147,655	\$1,316,844	\$1,390,384	\$1,461,234	\$948,379	\$6,844,262
Costs (\$)	Annual % of Planned	67%	99%	506%	326%	343%	75%	269%
Participants ¹	Total (Gross)	31	1,569	19,702	13,860	15,252	1,500	51,914
	Planned (Gross)	602	1,605	2,427	2,427	2,427	0	9,488
	Variance	-571	-36	17,275	11,433	12,825	1,500	42,426
	Annual % of Planned (Gross)	5%	98%	812%	571%	628%		547%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	24,484	1,156,888	10,573,042	6,834,001	6,803,477	827,576	26,219,469
154%	Realization Rate Adjustment (kWh/yr)	13,999	618,935	5,656,578	3,656,191	3,639,860	442,753	14,077,416
82%	Realization Rate Adjusted Savings (kWh/yr)	37,583	1,775,823	16,229,620	10,490,192	10,443,338	1,270,330	40,246,885
	Net-To-Gross Adjustment (kWh/yr)	-7,517	-355,165	-3,245,924	-1,898,725	-1,890,244	-229,930	-7,627,504
	Net Adjusted Savings (kWh/yr)	30,066	1,420,658	12,983,696	8,591,467	8,553,094	1,040,400	32,619,381
	Planned Net Savings (kWh/yr)	492,000	1,306,356	2,468,259	2,468,259	4,593,678	0	11,328,552
	Annual % Toward Planned Net Savings (kWh)	6%	109%	526%	348%	186%		288%
	Avg. Gross Savings Per Participant (kWh/yr)	790	737	537	493	446	552	505
	Avg. Net Savings Per Participant (kWh/yr)	970	905	659	620	561	694	628
Installed kW	Total Gross Demand Reduction (kW)	3	140	1,106	695	693	76	2,713
154%	Realization Rate Adjustment (kW)	2	75	592	372	371	41	1,452
82%	Realization Rate Adjusted Gross Demand Reduction (kW)	5	215	1,698	1,066	1,064	117	4,165
	Net-To-Gross Adjustment (kW)	-1	-43	-340	-193	-193	-21	-790
	Net Adjusted Demand Reduction (kW)	4	172	1,358	873	873	96	3,374
	Planned Net Demand Reduction (kW)	85	225	437	437	1,002	0	2,186
	Annual % Toward Planned Net Reduction (kW)	4%	76%	311%	200%	87%		154%
	Avg. Gross Demand Reduction Per Participant (kW)	0.1	0.1	0.1	0.05	0.05	0.05	0.05
	Avg. Net Demand Reduction Per Participant (kW)	0.1	0.1	0.1	0.06	0.06	0.06	0.07
Program Performance	Annual \$Admin. per Participant (Gross)	\$1,481	\$69	\$15	\$10	\$10	\$19	\$15
	Annual \$Admin. per kWh/year (Gross)	\$2	\$0	\$0.03	\$0.02	\$0	\$0	\$0.03
	Annual \$Admin. per kW (Gross)	\$14,840	\$771	\$273	\$206	\$220	\$366	\$287
	Annual SEM&V per \$Total	4.9%	9.7%	0.8%	2.6%	3.2%	12.1%	3.0%
	Annual \$Rebate per Participant (Gross)	\$220	\$226	\$226	\$206	\$208	\$217	\$215

1. Program closed end of 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.



3. The 2017 total gross deemed savings values reported in this table include adjustments of -2.1 kWh/year and -0.00044 kW made to the January 2017 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017. Specifically, the correction was in section 2.1.5 for "Low-Flow Showerhead" measures, to the " ΔT " variable, which is a measure of the change in temperature of the water used for shower and temperature entering the house ($\Delta T = T_{\text{shower}} - T_{\text{in house}}$). STEP Manual 7.0.0 reported the value as 44.9°F, but has been corrected to 44.1°F. This correction is reflected in STEP Manual version 8.0.0 in this EM&V report.
4. Realization Rate Adjustment occurred in 2015. 2012-2014 Net to Gross Adjustment was 80.0%. From 2015 forward Net to Gross Adjustment was 82% and Realization Rate as adjusted to 154%.



O.53 Virginia Residential Appliance Recycling Program (DSM Phase IV) 2015–2018

VA- Residential Appliance Recycling Program		2015	2016	2017	2018	2015-2018
Category	Indicator	Total	Total	Total	Total	Program Total
O&M(\$)	Direct Rebate					
O&M(\$)	Direct Implementation					
O&M(\$)	Direct EM&V					
O&M(\$)	Indirect Other (Administrative)	\$21,660	\$65,648	\$38,635	\$3,094	\$129,037
Costs (\$)	Total	\$929,051	\$2,160,027	\$981,865	\$54,790	\$4,125,733
Costs (\$)	Planned	\$1,102,158	\$2,072,738	\$1,086,648	\$10,474	\$4,272,019
Costs (\$)	Variance	-\$173,107	\$87,289	-\$104,783	\$44,316	-\$146,286
	Annual % of Planned	84%	104%	90%	523%	97%
Participants ¹	Total (Gross)	3,206	7,735	3,131	0	14,072
	Planned (Gross)	3,750	7,500	3,000	0	14,250
	Variance	-544	235	131	0	-178
	Annual % of Planned (Gross)	85%	103%	104%		99%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	3,618,359	7,552,110	3,016,432	0	14,186,901
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	3,618,359	7,552,110	3,016,432	0	14,186,901
77%	Net-To-Gross Adjustment (kWh/yr)	-832,223	-1,736,985	-693,779	0	-3,262,987
	Net Adjusted Savings (kWh/yr)	2,786,136	5,815,125	2,322,653	0	10,923,914
	Planned Net Savings (kWh/yr)	6,504,000	3,736,801	1,346,206	0	11,647,008
	Annual % Toward Planned Net Savings (kW/h)	42%	156%	173%		94%
	Avg. Gross Savings Per Participant (kW/h/yr)	1,129	976	963		1,008
	Avg. Net Savings Per Participant (kW/h/yr)	809	752	742		776
Installed kW	Total Gross Demand Reduction (kW)	541.6	1,130.4	451.5	0.0	2,123.5
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	541.6	1,130.4	451.5	0.0	2,123.5
77%	Net-To-Gross Adjustment (kW)	-124.6	-260.0	-103.8	0.0	-488.4
	Net Adjusted Demand Reduction (kW)	417.0	870.4	347.7	0.0	1,635.1
	Planned Net Demand Reduction (kW)	1,220.7	559.4	201.5	0.0	1,981.6
	Annual % Toward Planned Net Reduction (kW)	34%	156%	173%		83%
	Avg. Gross Demand Reduction Per Participant (kW)	0.17	0.15	0.14		0.15
	Avg. Net Demand Reduction Per Participant (kW)	0.13	0.11	0.11		0.12
Program Performance	Annual SAdmin. per Participant (Gross)	\$7	\$8	\$12		\$9
	Annual SAdmin. per kW/year (Gross)	\$0.01	\$0.01	\$0.01		\$0.01
	Annual SAdmin. per kW (Gross)	\$40	\$58	\$86		\$61
	Annual SEM&V per \$Total	1.1%	4.5%	7.3%	93.6%	5.6%
	Annual \$Rebate per Participant (Gross)	\$51	\$50	\$50		\$50

1. Program closed end of 2017.
2. A participant is a unique account number.



0.54 Virginia Commercial Lighting Program 2010–2012

VA- Commercial Lighting Program		2010	2011	2012	2010-2012
Category	Indicator	Total	Total	Total	Program Total
O&M(\$)	Direct Rebate				
O&M(\$)	Direct Implementation				
O&M(\$)	Direct EM&V				
O&M(\$)	Indirect Other (Administrative)	\$574,965	\$419,642	\$310,152	\$1,304,759
Costs (\$)	Total	\$1,896,257	\$5,239,777	\$2,682,806	\$9,818,840
Costs (\$)	Planned	\$1,683,194	\$6,018,217	\$9,231,456	\$16,932,868
Costs (\$)	Variance	\$213,062	-\$778,440	-\$6,548,651	-\$7,114,028
	Cum. % toward planned total	112.7%	87.1%	29.1%	58.0%
Participants	Total (Gross)	399	1,307	703	2,409
	Planned (Gross)	26	146	32	204
	Variance	373	1,161	671	2,205
	Cum. % toward planned total (Gross)	1534.6%	895.2%	2196.9%	1180.9%
kWh	Total Gross Deemed Savings	13,533,989	42,212,316	23,709,597	79,455,902
178.0%	Realization Rate Adjustment ¹	10,581,378	32,807,324	18,502,140	61,890,842
	Adjusted Gross Savings	24,115,366	75,019,641	42,211,737	141,346,744
50.0%	Net-To-Gross Adjustment	-12,057,683	-37,509,820	-21,105,869	-70,673,372
	Net Adjusted Savings	12,057,683	37,509,820	21,105,869	70,673,372
	Planned Savings (Net)	6,364,934	35,764,075	7,716,991	49,846,000
	Cum. % Toward Planned Savings (Net)	189.4%	104.9%	273.5%	141.8%
	Avg. Savings Per Participant (Net)	30,220	28,699	30,023	29,337
kW	Total Gross Deemed Demand	3,049	9,553	5,450	18,052
98.0%	Realization Rate Adjustment	-61.0	-191.1	-109.0	
	Adjusted Gross Demand	2,988	9,362	5,341	
50.0%	Net-To-Gross Adjustment	-1,494	-4,681	-2,670	-8,845
	Net Adjusted Demand	1,494	4,681	2,670	8,845
	Planned Demand (Net)	798	4,490	969	6,257
	Cum. % Toward Planned Demand (Net)	187.2%	104.3%	275.6%	141.4%
	Avg. Demand Per Participant (Net)	4	4	4	6,257
Program Performance	Cum. \$Admin. per Cum. Participant (Gross)	\$1,441	\$321	\$441	\$542
	Cum. \$Admin. per Cum. kWh (Gross)	\$0.04	\$0.01	\$0.01	\$0.02
	Cum. \$Admin. per Cum. kW (Gross)	\$189	\$44	\$57	\$72
	Cum. \$EM&V per Cum Total Costs (\$)	1.3%	5.9%	1.8%	3.9%
	Cum. \$Rebate per Cum. Participant (Gross)	\$2,445	\$2,829	\$2,681	\$2,722

1. Program closed July 31, 2012.
2. Realization rate is 177% January 1st through May 30th, 179% June 1st through September 30th, and 177% October 1st through December 31st.



0.55 Virginia Commercial HVAC Program 2010–2012

VA- Commercial HVAC Program		2010	2011	2012	2010-2012
Category	Indicator	Total	Total	Total	Program Total
O&M(\$)	Direct Rebate				
O&M(\$)	Direct Implementation				
O&M(\$)	Direct EM&V				
O&M(\$)	Indirect Other (Administrative)	\$109,504	\$109,822	\$68,630	\$287,956
Costs (\$)	Total	\$396,225	\$1,375,897	\$641,660	\$2,413,782
Costs (\$)	Planned	\$355,499	\$1,149,943	\$1,719,050	\$3,224,492
Costs (\$)	Variance	\$40,726	\$225,954	-\$1,077,390	-\$810,710
	Cum. % toward planned total	111.5%	119.6%	37.3%	74.9%
Participants	Total (Gross)	28	59	36	123
	Planned (Gross)	36	199	44	279
	Variance	-8	-140	-8	-156
	Cum % toward planned total (Gross)	77.8%	29.6%	81.8%	44.1%
kWh	Total Gross Deemed Savings	2,125,025	17,330,556	4,489,128	23,944,709
63.3%	Realization Rate Adjustment 1	-1,057,231	-7,280,807	-2,661,321	-10,999,359
	Adjusted Gross Savings	1,067,795	10,049,749	1,827,807	12,945,351
45.0%	Net-To-Gross Adjustment	-587,287	-5,527,362	-1,005,294	-7,119,943
	Net Adjusted Savings	480,508	4,522,387	822,513	5,825,408
	Planned Savings (Net)	993,361	5,481,166	1,209,473	7,684,000
	Cum. % Toward Planned Savings (Net)	48.4%	82.5%	68.0%	75.8%
	Avg. Savings Per Participant (Net)	17,161	76,651	22,848	47,361
kW	Total Gross Deemed Demand	281	1,629	568	2,477
97.0%	Realization Rate Adjustment	110	555	316	981
	Adjusted Gross Demand	390	2,184	884	3,458
45.0%	Net-To-Gross Adjustment	-215	-1,201	-486	-1,902
	Net Adjusted Demand	176	983	398	1,556
	Planned Demand (Net)	401	2,210	488	3,099
	Cum. % Toward Planned Demand (Net)	43.8%	44.5%	81.5%	50.2%
	Avg. Demand Per Participant (Net)	6	17	11	13
Program Performance	Cum. \$Admin. per Cum. Participant (Gross)	\$3,911	\$1,861	\$1,906	\$2,341
	Cum. \$Admin. per Cum. kWh (Gross)	\$0.05	\$0.01	\$0.02	\$0.01
	Cum. \$Admin. per Cum. kW (Gross)	\$390	\$67	\$121	\$116
	Cum. SEM&V per Cum Total Costs (\$)	6.3%	19.0%	19.1%	16.9%
	Cum. \$Rebate per Cum. Participant (Gross)	\$5,120	\$11,274	\$3,946	\$8,883

1. Program closed July 31, 2012.
2. Realization rate is 63% January 1st through May 30th, 35% June 1st through September 30th, and 63% October 1st through December 31st.



O.56 Virginia Non-Residential Duct Testing and Sealing Program 2012-2017

Category	Indicator	2012 Total	2013 Total	2014 Total	2015 Total	2016 Total ²	2017 Total	2012-2017 Program Total
O&M (\$)	Direct Rebate							
O&M (\$)	Direct Implementation							
O&M (\$)	Direct EM&V							
O&M (\$)	Indirect Other (Administrative)	\$71,464	\$202,348	\$393,299	\$219,936	\$171,043	\$69,478	\$1,127,568
Costs (\$)	Total	\$608,554	\$2,267,525	\$8,935,038	\$7,280,638	\$5,627,877	\$1,765,692	\$26,485,324
Costs (\$)	Planned	\$1,799,295	\$4,387,635	\$5,595,842	\$5,700,026	\$5,960,859	\$1,122,254	\$24,565,911
Costs (\$)	Variance	-\$1,190,740	-\$2,120,110	\$3,339,197	\$1,580,612	-\$332,983	\$643,437	\$1,919,413
	Annual % of Planned	34%	52%	160%	128%	94%	157%	108%
Participants ¹	Total (Gross)	11	357	1,700	1,655	640	81	4,444
	Planned (Gross)	112	299	472	472	578	0	1,933
	Variance	-101	58	1,228	1,183	62	81	-2,511
	Annual % of Planned (Gross)	10%	119%	360%	351%	111%		230%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	77,742	1,765,683	28,470,361	20,488,106	26,352,640	4,251,334	81,405,866
87%	Realization Rate Adjustment (kWh/yr)	-10,106	-229,539	-3,701,147	-2,663,454	-3,425,843	-552,673	-10,582,763
	Realization Rate Adjusted Savings (kWh/yr)	67,635	1,536,144	24,769,214	17,824,652	22,926,796	3,698,661	70,823,104
97%	Net-To-Gross Adjustment (kWh/yr)	-1,894	-43,012	-693,538	-499,090	-641,950	-103,563	-1,983,047
	Net Adjusted Savings (kWh/yr)	65,742	1,493,132	24,075,676	17,325,562	22,284,846	3,595,098	68,840,057
	Planned Net Savings (kWh/yr)	3,324,000	8,826,223	15,569,864	15,569,864	3,432,339	0	46,722,290
	Annual % Toward Planned Net Savings (kWh)	2%	17%	155%	111%	649%		147%
	Avg. Gross Savings Per Participant (kWh/yr)	7,067	4,946	16,747	12,380	41,176	52,486	18,318
	Avg. Net Savings Per Participant (kWh/yr)	5,977	4,182	14,162	10,469	34,820	44,384	15,491
Installed kW	Total Gross Demand Reduction (kW)	8	508	2,051	2,514	2,594	695	8,370
94%	Realization Rate Adjustment (kW)	0	-29	-119	-146	-150	-40	-485
	Realization Rate Adjusted Gross Demand Reduction(kW)	8	478	1,932	2,368	2,444	655	7,884
97%	Net-To-Gross Adjustment (kW)	0	-13	-54	-66	-68	-18	-221
	Net Adjusted Demand Reduction (kW)	7	465	1,878	2,301	2,375	637	7,663
	Planned Net Demand Reduction (kW)	737	1,963	3,479	3,479	1,409	0	11,066
	Annual % Toward Planned Net Reduction (kW)	1%	24%	54%	66%	169%		69%
	Avg. Gross Demand Reduction Per Participant (kW)	0.73	1.42	1.21	1.52	4.05	8.58	1.88
	Avg. Net Demand Reduction Per Participant (kW)	0.67	1.30	1.10	1.39	3.71	7.86	1.72
Program Performance	Annual \$Admin. per Participant (Gross)	\$6,497	\$567	\$231	\$133	\$267	\$858	\$254
	Annual \$Admin. per kWh/year (Gross)	\$0.92	\$0.11	\$0.01	\$0.01	\$0.01	\$0.02	\$0.01
	Annual \$Admin. per kW (Gross)	\$8,904	\$398	\$192	\$88	\$66	\$100	\$135
	Annual SEM&V per \$Total	11.8%	2.8%	4.1%	1.1%	2.0%	4.5%	2.9%
	Annual \$Rebate per Participant (Gross)	\$1,203	\$4,313	\$4,388	\$3,846	\$7,622	\$18,095	\$4,888



1. Program ended in 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.
3. The 2016 total gross deemed savings values reported in this table differs from values in the May 1, 2017 EM&V report, and have been refilled with the Commission. An adjustment totaled -30,849,970 kWh/year and 0 kW for 2016 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017, in section 12. The adjustment was made to full load heating hours (FLHheat) in Tables 90 and 91 to be consistent with those in the Mid-Atlantic TRM v 6, in response to requests by the North Carolina Public Staff Utilities Commission Re: Docket No. E-22, Sub 545, on October 23, 2017. This affected multiple Non-Residential HVAC measures (e.g. heat pumps, variable refrigerant flow, mini split systems) that reference Table 90 and 91, in multiple Non-Residential programs. This adjustment is reflected in STEP Manual version 8.0.0 in this EM&V report.



O.57 Virginia Non-Residential Energy Audit Program 2012–2017

VA - Non-Residential Energy Audit Program Category	Indicator	2012 Total	2013 Total	2014 Total	2015 Total	2016 Total	2017 Total	2012-2017 Program Total
O&M (\$)	Direct Rebate	\$67,698	\$151,749	\$309,322	\$15,730	\$74,888	\$10,321	\$629,710
O&M (\$)	Direct Implementation	\$565,256	\$1,714,452	\$5,649,367	\$453,753	\$2,464,067	\$262,302	\$11,109,197
O&M (\$)	Direct EM&V	\$841,286	\$1,848,339	\$2,175,831	\$1,868,401	\$1,936,926	\$304,034	\$8,974,818
O&M (\$)	Indirect Other (Administrative)	-\$276,030	-\$133,887	\$3,473,536	-\$1,414,648	\$527,140	-\$41,732	\$2,134,379
Costs (\$)	Annual % of Planned	67%	93%	260%	24%	127%	86%	124%
Costs (\$)	Total (Gross)	8	514	22	69	118	4	735
Participants ¹	Total (Gross)	1	302	1,116	73	125	15	1,632
	Planned (Gross)	138	373	589	589	721	0	2,410
	Variance	-137	-71	-527	-516	-596	15	-778
	Annual % of Planned (Gross)	19%	81%	189%	12%	17%		68%
Installed kWh/year	Total (Gross)	35,433	4,498,061	31,588,249	667,407	6,765,468	196,549	43,751,165
	Attribution Rate weighted by Measure	100%	98%	99%	84%	99%	95%	93%
	Realization Rate weighted by Measure	97%	72%	93%	97%	92%	86%	91%
	Adjusted (Net) by Realization Rate and Attribution Rate	34,538	3,168,993	29,013,666	546,608	6,211,917	162,456	39,138,178
	Planned (Net)	3,401,000	9,140,494	17,399,649	17,399,649	4,818,529	0	52,159,321
	Annual % Toward Planned Net Savings (kWh)	1.0%	35%	167%	3%	129%		75%
	Avg. Gross Savings Per Participant (kWh/yr)	35,433	14,894	28,305	9,143	54,124	13,103	26,808
	Avg. Net Savings Per Participant (kWh/yr)	34,538	10,493	25,998	7,488	49,695	10,830	23,982
Installed kW	Total (Gross)	10	956	2,104	9	765	24	3,868
	Attribution Rate weighted by Measure	100%	98%	99%	94%	99%	93%	99%
	Realization Rate weighted by Measure	97%	78%	83%	66%	92%	86%	84%
	Adjusted (Net) by Realization Rate and Attribution Rate	10	733	1,724	7	701	19	3,195
	Planned (Net)	600	1,614	15,040	6,390	740	0	24,384
	Annual % Toward Planned Net Reduction (kW)	2%	45%	11%	0%	95%		13%
	Avg. Gross Demand Reduction Per Participant (kW)	10.0	3.2	1.9	0.1	6.1	1.6	2.4
	Avg. Net Demand Reduction Per Participant (kW)	9.8	2.4	1.5	0.1	5.6	1.3	2.0
Program Performance	Annual \$ Admin. per Participant (Gross)	\$67,698	\$502	\$277	\$215	\$599	\$688	\$386
	Annual \$ Admin. per kWh/Year (Gross)	\$1.91	\$0.03	\$0.01	\$0.02	\$0.01	\$0.05	\$0.01
	Annual \$ Admin. per kW (Gross)	\$6,737	\$159	\$147	\$1846	\$98	\$422	\$0.01
	Annual \$ EM&V per \$ Total	17.6%	4.9%	6.7%	19.5%	4.5%	41.1%	7.8%
	Annual \$ Rebate per Participant (Gross)	\$7,413	\$3,605	\$3,953	\$564	\$15,359	\$4,456	\$4,617

1. Program closed end of 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.



O.58 Virginia Non-Residential Heating and Cooling Efficiency Program (DSM Phase III) 2014–2020

VA-Non-Residential Heating & Cooling Efficiency Program Category	Indicator	2014 Total	2015 Total	2016 Total ¹	2017 Total	2018 Total	2019 Total	2020 Total	2014-2020 Program Total
O&M(S)	Direct Rebate	\$14,267	\$38,982	\$41,094	\$69,115	\$98,564	\$37,916	\$2,765	\$302,703
O&M(S)	Direct Implementation	\$460,689	\$1,347,317	\$1,352,118	\$1,756,407	\$1,745,485	\$645,966	\$47,468	\$7,355,509
O&M(S)	Direct EM&V	\$1,530,331	\$1,859,694	\$1,807,707	\$1,858,262	\$1,977,851	\$1,000,294	\$0	\$9,134,139
O&M(S)	Indirect Other (Administrative)	-\$1,069,642	-\$512,377	-\$455,589	-\$101,796	-\$232,365	\$545,672	\$47,468	-\$1,778,630
	Annual % of Planned	30%	72%	75%	95%	88%	644%	N/A	81%
Participants ¹	Total (Gross)	6	114	89	103	77	17	0	406
	Planned (Gross)	261	746	782	797	807	0	0	3,393
	Variance	-255	-632	-693	-694	-730	17	0	-2,987
	Annual % of Planned (Gross)	2%	15%	11%	13%	10%	N/A	N/A	12%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	1,456,991	11,129,837	13,647,306	7,526,876	9,818,796	3,328,123	0	46,907,929
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0
70%	Realization Rate Adjusted Savings (kWh/yr)	1,456,991	11,129,837	13,647,306	7,526,876	9,818,796	3,328,123	0	46,907,929
	Net-To-Gross Adjustment (kWh/yr)	-437,097	-3,338,951	-4,094,192	-2,258,063	-2,945,639	-998,437	0	-14,072,379
	Net Adjusted Savings (kWh/yr)	1,019,894	7,790,886	9,553,114	5,268,813	6,873,157	2,329,686	0	32,835,550
	Planned Net Savings (kWh/yr)	3,295,301	9,430,186	24,119,220	38,355,947	31,003,178	0	0	106,207,832
	Annual % Toward Planned Net Savings (kWh)	31%	83%	40%	14%	22%	N/A	N/A	31%
	Avg. Gross Savings Per Participant (kWh/yr)	242,832	97,650	153,341	73,076	127,517	195,772	N/A	115,537
	Avg. Net Savings Per Participant (kWh/yr)	169,982	68,341	107,338	51,154	89,262	137,040	N/A	80,876
Installed kW	Total Gross Demand Reduction (kW)	510.1	2,777.0	2,084.3	1,946.7	568.8	198.8	0.0	8,085.6
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	Realization Rate Adjusted Gross Demand Reduction (kW)	510.1	2,777.0	2,084.3	1,946.7	568.8	198.8	0.0	8,085.6
	Net-To-Gross Adjustment (kW)	-153.0	-833.1	-625.3	-584.0	-170.6	-59.6	0.0	-2,425.7
	Net Adjusted Demand Reduction (kW)	357.1	1,943.9	1,459.0	1,362.7	398.1	139.2	0.0	5,660.0
	Planned Net Demand Reduction (kW)	835.2	2,387.2	4,089.6	15,592.6	7,536.0	0.0	0.0	30,440.6
	Annual % Toward Planned Net Reduction (kW)	43%	81%	36%	9%	5%	N/A	N/A	19%
	Avg. Gross Demand Reduction Per Participant (kW)	85.0	24.4	23.4	18.9	7.4	11.7	N/A	19.9
	Avg. Net Demand Reduction Per Participant (kW)	59.5	17.1	16.4	13.2	5.2	8.2	N/A	13.9
Program Performance	Annual \$Admin. per Participant (Gross)	\$2,378	\$342	\$462	\$671	\$1,280	\$2,230	N/A	\$746
	Annual \$Admin. per kWh/year (Gross)	\$0.01	\$0.00	\$0.00	\$0.01	\$0.01	\$0.01	N/A	\$0.01
	Annual \$Admin. per kW (Gross)	\$28	\$14	\$20	\$36	\$173	\$191	N/A	\$37
	Annual SEM&V per \$Total	5.6%	6.1%	8.6%	7.6%	7.3%	11.0%	94.2%	8.2%
	Annual \$Rebate per Participant (Gross)	\$19,834	\$7,909	\$10,729	\$11,629	\$15,058	\$24,826	N/A	\$11,711

1. Program closed end of 2019.
2. A participant is a unique account number.
3. The 2016 total gross deemed savings values reported in this table differs from values in the May 1, 2017 EM&V report, and have been refilled with the Commission. The adjustments totalled -154,576 kWh/year and 0 kW for 2016 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017, in section 10. The adjustment was made to full load heating hours (FLHheat) in Tables 90 and 91 to be consistent with those in the Mid-Atlantic TRM v 6, in response to requests by the North Carolina Public Staff Utilities Commission Re: Docket No. E-22, Sub 545, on



October 23, 2017. This affected multiple Non-Residential HVAC measures (e.g. heat pumps, variable refrigerant flow, mini split systems) that reference Table 90 and 91, in multiple Non-Residential programs. This adjustment is reflected in STEP Manual version 8.0.0 in this EM&V report.



O.59 Virginia Non-Residential Lighting Systems & Controls Program (DSM Phase III) 2014-2022

Category	Indicator	2014 Total	2015 Total	2016 Total ²	2017 Total	2018 Total	2019 Total	2020 Total	2014-2020 Program Total
V.A.- Non-Residential Lighting Systems & Controls Program	Direct Rebate	\$39,157	\$191,137	\$214,891	\$351,449	\$351,760	\$289,158	\$2,081	\$1,439,634
	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct EM&V	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total	\$1,295,925	\$6,608,836	\$7,070,615	\$8,931,669	\$6,229,352	\$4,806,213	\$36,137	\$34,978,746
	Planned	\$3,048,223	\$5,255,067	\$5,349,167	\$5,268,411	\$6,289,779	\$100,294	\$0	\$25,410,941
	Variance	-\$1,752,298	-\$1,253,769	-\$1,721,448	-\$3,663,258	-\$60,427	\$4,705,918	\$36,137	\$9,567,805
	Annual % of Planned	43%	123%	132%	170%	99%	4792%	N/A	138%
Participants ¹	Total (Gross)	118	1,241	1,203	868	649	422	0	4,501
	Planned (Gross)	688	1,504	1,531	1,533	1,807	0	0	7,083
	Variance	-570	-263	-328	-685	-1,158	422	0	-2,582
	Annual % of Planned (Gross)	17%	83%	79%	56%	36%	N/A	N/A	64%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	4,749,693	50,828,062	65,876,985	71,024,607	45,157,541	41,988,907	0	279,625,795
	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	4,749,693	50,828,062	65,876,985	71,024,607	45,157,541	41,988,907	0	279,625,795
	Net-To-Gross Adjustment (kWh/yr)	-1,424,908	-15,248,419	-19,763,096	-21,307,382	-13,547,262	-12,596,672	0	-83,887,739
	Net Adjusted Savings (kWh/yr)	3,324,785	35,579,643	46,113,890	49,717,225	31,610,279	29,392,235	0	195,738,057
	Planned Net Savings (kWh)	12,317,239	27,461,536	24,119,220	33,214,031	40,368,376	0	0	137,480,402
	Annual % Toward Planned Net Savings (kWh)	27%	130%	191%	150%	78%	N/A	N/A	142%
	Avg. Gross Savings Per Participant (kWh/yr)	40,252	40,957	54,761	81,826	69,580	99,500	0	62,125
	Avg. Net Savings Per Participant (kWh/yr)	28,176	28,670	38,332	57,278	48,706	69,650	0	43,488
	Total Gross Demand Reduction (kW)	998.5	10,674.2	15,380.0	11,958.2	7,222.3	5,637.5	0.0	51,870.7
Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Realization Rate Adjusted Gross Demand Reduction (kW)	998.5	10,674.2	15,380.0	11,958.2	7,222.3	5,637.5	0.0	51,870.7	
Net-To-Gross Adjustment (kW)	-299.5	-3,202.3	-4,614.0	-3,587.5	-2,166.7	-1,691.3	0.0	-15,561.2	
Net Adjusted Demand Reduction (kW)	698.9	7,472.0	10,766.0	8,370.8	5,055.6	3,946.3	0.0	36,309.5	
Planned Net Demand Reduction (kW)	3,228.9	7,670.4	4,089.4	5,486.3	7,269.0	0.0	0.0	27,444.0	
Annual % Toward Planned Net Reduction (kW)	22%	97%	263%	153%	70%	N/A	N/A	131%	
Avg. Gross Demand Reduction Per Participant (kW)	8.5	8.6	12.8	13.8	11.1	13.4	N/A	11.5	
Avg. Net Demand Reduction Per Participant (kW)	5.9	6.0	8.9	9.6	7.8	9.4	N/A	8.1	
Program Performance	Annual \$ Admin. per Participant (Gross)	\$332	\$154	\$179	\$405	\$542	\$685	N/A	\$320
	Annual \$ Admin. per kWh/year (Gross)	\$0.01	\$0.00	\$0.00	\$0.01	\$0.01	\$0.01	N/A	\$0.01
	Annual \$ Admin. per kW (Gross)	\$39	\$18	\$14	\$29	\$49	\$51	N/A	\$28
	Annual \$ EM&V per \$ Total	5.1%	1.8%	1.5%	1.1%	1.6%	1.3%	94.2%	1.7%
	Annual \$ Rebate per Participant (Gross)	\$4,255	\$4,487	\$5,025	\$8,725	\$7,668	\$9,892	N/A	\$6,410

1. Program closed end of 2019.
2. A participant is a unique account number.
3. The 2016 total gross deemed savings values reported in this table differs from values in the May 1, 2017 EM&V report and have been refilled with the Commission. The adjustments totaled -14,862,478 kWh/year and 168 kW for 2016 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017, in section 9.1.1. The adjustment was to waste heat factors (WHFe and WHFd) applied to lighting fixtures installed in 2016, where the program participant building HVAC systems was assumed to be heat pump heating and cooling systems, rather than the



previous assumption of AC cool and non-electric heat systems. This adjustment was made in response to requests by the North Carolina Public Staff Utilities Commission Re: Docket No. E-22, Sub 545, on October 23, 2017. It is reflected in STEP Manual version 8.0.0 in this EM&V report.



O.60 Virginia Non-Residential Window Film Program (DSM Phase III) 2014–2020

VA- Non-Residential Window Film Program		2014	2015	2016	2017	2018	2019	2020	2014-2020
Category	Indicator	Total	Total	Total	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate								
O&M (\$)	Direct Implementation								
O&M (\$)	Direct EM&V								
O&M (\$)	Indirect Other (Administrative)	\$11,980	\$12,457	\$13,085	\$21,659	\$20,852	\$5,421	\$1,448	\$86,903
Capital (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total	\$382,712	\$400,634	\$430,529	\$550,444	\$369,265	\$103,090	\$25,376	\$2,262,051
Costs (\$)	Planned	\$705,718	\$1,240,249	\$1,712,877	\$1,921,714	\$2,237,336	\$601,177	\$0	\$7,878,071
Costs (\$)	Variance	-\$323,005	-\$839,615	-\$1,282,348	-\$1,371,270	-\$1,868,072	\$42,913	\$25,376	-\$5,616,020
	Annual % of Planned	54%	32%	25%	29%	17%	171%	N/A	29%
Participants ¹	Total Participants	3	22	70	59	91	8	0	253
	Total Square Feet	53,021	97,121	57,228	231,634	33,461	3,913	0	476,378
	Planned Square Feet	133,086	681,000	1,148,077	1,371,237	1,454,781	0	0	4,788,181
	Variance	-80,065	-583,879	-1,090,849	-1,139,603	-1,421,320	3,913	0	-4,311,803
	Annual % of Planned (Gross)	40%	14%	5%	17%	2%	N/A	N/A	10%
Square feet	Total Square Feet	53,021	97,121	57,228	231,634	33,461	3,913	0	476,378
	North Facing	11,663	23,535	13,931	48,150	2,090	1,104	0	100,473
	East Facing	14,597	24,260	8,105	61,663	7,387	424	0	116,436
	West Facing	15,090	22,336	15,826	62,196	12,254	713	0	128,915
	South Facing	11,671	26,490	19,366	59,625	11,730	1,672	0	130,554
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	1,152,476	3,077,815	464,794	1,734,665	170,954	8,956	0	6,609,660
	100% Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	1,152,476	3,077,815	464,794	1,734,665	170,954	8,956	0	6,609,660
	80% Net-To-Gross Adjustment (kWh/yr)	-230,495	-615,563	-92,959	-346,933	-34,191	-1,791	0	-1,321,932
	Net Adjusted Savings (kWh/yr)	921,980	2,462,252	371,835	1,387,732	136,764	7,165	0	5,287,728
	Planned Net Savings (kWh/yr)	2,395,548	12,258	15,842,639	15,209,376	10,484,938	0	0	43,944,759
	Annual % Toward Planned Net Savings (kWh)	38%	20087%	2%	9%	1%	N/A	N/A	12%
	Avg. Gross Savings Per Participant (kWh/yr)	384,159	139,901	6,640	29,401	1,879	1,119	N/A	26,125
	Avg. Gross Savings Per Square Foot (kWh/yr)	22	32	8	7	5	2	N/A	14
	Avg. Net Savings Per Participant (kWh/yr)	307,327	111,921	5,312	23,521	1,503	896	N/A	20,900
Avg. Net Savings Per Square Foot (kWh/yr)	17	25	6	6	4	2	N/A	11	
Installed kW	Total Gross Demand Reduction (kW)	233.1	626.6	139.7	471.5	57.6	2.5	0.0	1,531.0
	100% Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	233.1	626.6	139.7	471.5	57.6	2.5	0.0	1,531.0
	80% Net-To-Gross Adjustment (kW)	-46.6	-125.3	-27.9	-94.3	-11.5	-0.5	0.0	-306.2
	Net Adjusted Demand Reduction (kW)	186.5	501.2	111.8	377.2	46.1	2.0	0.0	1,224.8
	Planned Net Demand Reduction (kW)	532.3	2.4	14,497.4	13,692.8	9,627.0	0.0	0.0	38,351.9
	Annual % Toward Planned Net Reduction (kW)	35%	20885%	1%	3%	0.5%	N/A	N/A	3%
	Avg. Gross Demand Reduction Per Participant (kW)	78	28	2	8	0.6	0	N/A	6
	Avg. Gross Demand Reduction Per Square Foot (kW)	0.004	0.006	0.002	0.002	0.002	0.001	N/A	0.003
	Avg. Net Demand Reduction Per Participant (kW)	62	23	2	6	0.5	0	N/A	5
Avg. Net Demand Reduction Per Square Foot (kW)	0.004	0.005	0.002	0.002	0.00	0.00	N/A	0	
Program Performance	Annual \$Admin. per Participant (Gross)	\$3,993	\$566	\$187	\$367	\$229	\$678	N/A	\$343
	Annual \$Admin. per kWh/year (Gross)	\$0.01	\$0.00	\$0.03	\$0.01	\$0.12	\$0.61	N/A	\$0.01
	Annual \$Admin. per kW (Gross)	\$51	\$20	\$94	\$46	\$362.0	\$2,182.7	N/A	\$57
	Annual \$EM&V per \$Total	22%	17%	26%	16%	22%	54%	94%	23%
	Annual \$Rebate per Participant (Gross)	\$6,090	\$512	\$667	\$3,284	\$285	\$406	N/A	\$1,182

1. Program closed end of 2019.
2. A participant is a unique account number



0.61 Virginia Residential Income and Age Qualifying Home Improvement Program 2015–2021

VA - Residential Income and Age Qualifying Home Improvement Program			2015	2016	2017	2018	2019	2020	2021	2015-2021
Category	Measure	Indicator	Total	Total	Total	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate								
O&M (\$)		Direct Implementation								
O&M (\$)		Direct EM&V								
O&M (\$)		Indirect Other (Administrative)	\$48,256	\$191,950	\$199,872	\$80,889	\$166,845	\$89,410	\$78,882	\$856,103
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$2,069,822	\$6,315,785	\$5,079,529	\$1,432,463	\$4,050,714	\$1,678,260	\$1,682,300	\$22,308,872
Costs (\$)		Planned	\$3,056,782	\$5,856,409	\$4,648,601	\$2,371,260	\$4,192,450	\$4,381,475	\$2,232,429	\$26,739,407
Costs (\$)		Variance	-\$986,960	-\$459,376	-\$430,927	-\$938,797	-\$141,736	-\$2,703,215	-\$550,129	-\$4,430,534
		Annual % of Planned	68%	108%	109%	60%	97%	38%	75%	83%
Participants ¹		Total (Gross)	1,523	8,403	5,970	1,141	5,897	1,047	1,867	25,848
		Planned	1,849	3,843	3,846	2,000	4,218	4,218	1,880	21,854
		Variance	-326	4,560	2,124	-859	1,679	-3,171	-13	3,994
		Annual % of Planned (Gross)	82%	219%	155%	57%	140%	25%	99%	118%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	984,230	3,575,492	2,443,920	447,775	1,453,805	223,320	459,164	9,587,706
		Realization Rate Weighted by Measure	105%	105%	105%	105%	105%	105%	100%	105%
		Realization Rate Adjustment (kWh/yr)	49,212	178,775	122,196	22,389	72,690	11,166	0	456,427
		Realization Rate Adjusted Savings (kWh/yr)	1,033,442	3,754,267	2,566,116	470,164	1,526,495	234,486	459,164	10,044,134
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	80%	99%
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	-91,833	-91,833
		Net Adjusted Savings (kWh/yr)	1,033,442	3,754,267	2,566,116	470,164	1,526,495	234,486	367,331	9,952,301
		Planned Net Savings (kWh/yr)	1,810,380	998,136	765,945	175,247	728,300	2,120,348	697,856	7,296,212
		Annual % Toward Planned Net Savings	57.1%	376.1%	335.0%	268.3%	209.6%	11.1%	52.6%	136.4%
		Avg. Gross Savings Per Participant (kWh/yr)	646	426	409	392	247	213	246	371
		Avg. Net Savings Per Participant (kWh/yr)	679	447	430	412	259	224	197	385
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	80.2	398.0	229.2	34.9	229.3	58.4	57.9	1,087.8
		Realization Rate Weighted by Measure	105%	105%	105%	105%	105%	105%	100%	105%
		Realization Rate Adjustment (kW)	4.0	19.9	11.5	1.7	11.5	2.9	0.0	51.5
		Realization Rate Adjusted Gross Demand Reduction (kW)	84.2	417.9	240.6	36.6	240.7	61.3	57.9	1,139.3
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	80%	99%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	-11.6	-11.6
		Net Adjusted Demand Reduction (kW)	84.2	417.9	240.6	36.6	240.7	61.3	46.3	1,127.7
		Planned Net Savings (kW)	415.0	217.7	170.2	0.0	75.6	205.1	135.4	1,218.9
		Annual % Toward Planned Net Reduction	20.3%	192.0%	141.4%	N/A	318.6%	29.9%	34.2%	92.5%
		Avg. Gross Demand Reduction Per Participant (kW)	0.05	0.05	0.04	0.03	0.04	0.06	0.03	0.04
		Avg. Net Demand Reduction Per Participant (kW)	0.06	0.05	0.04	0.03	0.04	0.06	0.02	0.04
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	155.4	155.4
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	100%
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	155.4	155.4
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	80%	80%
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-31.1	-31.1
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	124.4	124.4
		Planned Net Savings (kW)	-	-	-	-	-	-	0.0	0.0
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	N/A
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	0.08	0.08
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	0.07	0.07
Measures										
Program Performance		Cum. \$Admin. per Participant (Gross)	\$32	\$24	\$28	\$31	\$30	\$32	\$33	\$33
		Cum. \$Admin. per kWh/year (Gross)	\$0.05	\$0.05	\$0.06	\$0.07	\$0.09	\$0.09	\$0.09	\$0.09
		Cum. \$Admin. per kW (Gross)	\$692	\$502	\$622	\$702	\$708	\$755	\$787	\$787
		Cum. \$EM&V per \$T total	0.6%	1.2%	1.6%	2.1%	2.2%	2.5%	2.8%	2.8%
		Cum. \$Rebate per Participant (Gross)	\$582	\$607	\$621	\$621	\$595	\$610	\$610	\$610



O.62 Virginia Non-Residential Small Business Improvement Program 2016-2021

VA - Non-Residential Small Business Improvement Program			2016	2017	2018	2019	2020	2021	2016-2021
Category	Measure	Indicator	Total	Total	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate							
O&M (\$)		Direct Implementation							
O&M (\$)		Direct EM&V							
O&M (\$)		Indirect Other (Administrative)	\$21,431	\$150,600	\$190,612	\$162,502	\$146,422	\$37,548	\$709,115
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$705,139	\$3,827,332	\$3,375,566	\$3,446,135	\$2,789,194	\$800,775	\$14,944,141
Costs (\$)		Planned	\$2,306,687	\$5,322,647	\$6,548,890	\$7,784,513	\$8,769,684	\$627,060	\$31,359,481
Costs (\$)		Variance	-\$1,601,548	-\$1,495,315	-\$3,173,324	-\$4,338,378	-\$5,980,489	\$173,715	-\$16,415,341
		Annual % of Planned	31%	72%	52%	44%	32%	128%	48%
Participants ¹		Total (Gross)	67	937	510	503	327	68	2,412
		Planned	216	635	780	928	1,075	0	3,634
		Variance	-149	302	-270	-425	-748	68	-1,222
		Annual % of Planned (Gross)	31%	148%	65%	54%	30%	N/A	66%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	656,801	14,699,005	15,998,914	11,648,664	8,097,820	1,808,558	52,909,762
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	656,801	14,699,005	15,998,914	11,648,664	8,097,820	1,808,558	52,909,762
		Net-To-Gross Rate Weighted by Measure	93%	93%	93%	93%	93%	93%	93%
		Net-To-Gross Adjustment (kWh/yr)	-45,976	-1,028,930	-1,119,924	-815,407	-566,847	-126,599	-3,703,683
		Net Adjusted Savings (kWh/yr)	610,825	13,670,074	14,878,990	10,833,258	7,530,972	1,681,959	49,206,079
		Planned Net Savings (kWh/yr)	1,254,097	4,323,476	5,760,927	9,774,740	29,581,410	0	50,694,651
		Annual % Toward Planned Net Savings	48.7%	316.2%	258.3%	110.8%	25.5%	N/A	97.1%
		Avg. Gross Savings Per Participant (kWh/yr)	9,803	15,687	31,370	23,158	24,764	26,596	21,936
		Avg. Net Savings Per Participant (kWh/yr)	9,117	14,589	29,174	21,537	23,030	24,735	20,401
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	131.5	3,098.0	3,475.7	2,553.5	1,623.5	328.0	11,210.2
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	131.5	3,098.0	3,475.7	2,553.5	1,623.5	328.0	11,210.2
		Net-To-Gross Rate Weighted by Measure	93%	93%	93%	93%	93%	93%	93%
		Net-To-Gross Adjustment (kW)	-9.2	-216.9	-243.3	-178.7	-113.6	-23.0	-784.7
		Net Adjusted Demand Reduction (kW)	122.3	2,881.2	3,232.4	2,374.8	1,509.8	305.0	10,425.5
		Planned Net Savings (kW)	307.7	660.7	1,135.0	1,930.3	5,545.5	0.0	9,579.2
		Annual % Toward Planned Net Reduction	39.8%	436.1%	284.8%	123.0%	27.2%	N/A	108.8%
		Avg. Gross Demand Reduction Per Participant (kW)	2.0	3.3	6.8	5.1	5.0	4.8	4.6
		Avg. Net Demand Reduction Per Participant (kW)	1.8	3.1	6.3	4.7	4.6	4.5	4.3
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	231.8	231.8
		Realization Rate Weighted by Measure	-	-	-	-	-	100%	100%
		Realization Rate Adjustment (kW)	-	-	-	-	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	231.8	231.8
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	93%	93%
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-16.2	-16.2
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	215.6	215.6
		Planned Net Savings (kW)	-	-	-	-	-	0.0	0.0
		Annual % Toward Planned Net Reduction	-	-	-	-	-	N/A	N/A
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	3.4	3.4
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	3.2	3.2
Measures									
Program Performance		Cum. \$Admin. per Participant (Gross)	\$320	\$171	\$240	\$260	\$287	\$294	\$294
		Cum. \$Admin. per kWh/year (Gross)	\$0.03	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01
		Cum. \$Admin. per kW (Gross)	\$163	\$53	\$54	\$57	\$62	\$63	\$63
		Cum. \$EM&V per \$Total	6.5%	3.5%	3.4%	3.0%	3.2%	4.1%	4.1%
		Cum. \$Rebate per Participant (Gross)	\$1,364	\$2,598	\$3,131	\$3,475	\$3,662	\$3,685	\$3,685



P. PROGRAM PERFORMANCE INDICATOR TABLES FOR NORTH CAROLINA

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P.1 North Carolina Residential Efficient Products Marketplace Program 2019-2022

P.1.1 2019-2022 North Carolina Residential Efficient Products Marketplace Annual Indicator Tables

NC - Residential Efficient Products Marketplace Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$0	\$12,075	\$18,123	\$12,878	\$43,076
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$238,201	\$386,515	\$308,435	\$933,152
Costs (\$)		Planned	\$0	\$425,185	\$440,922	\$633,498	\$1,499,606
Costs (\$)		Variance	\$0	-\$186,984	-\$54,407	-\$325,063	-\$566,454
		Annual % of Planned	N/A	56%	88%	49%	62%
Participants ¹		Total (Gross)	0	86,493	116,668	84,301	287,462
		Planned	0	138,728	160,503	175,167	474,398
		Variance	0	-52,235	-43,835	-90,866	-186,936
		Annual % of Planned (Gross)	N/A	62%	73%	48%	61%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	2,707,492	3,582,113	2,828,480	9,118,085
		Realization Rate Weighted by Measure	N/A	100%	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	2,707,492	3,582,113	2,828,480	9,118,085
		Net-To-Gross Rate Weighted by Measure	N/A	66%	47%	47%	53%
		Net-To-Gross Adjustment (kWh/yr)	0	-911,011	-1,906,060	-1,501,251	-4,318,322
		Net Adjusted Savings (kWh/yr)	0	1,796,481	1,676,053	1,327,228	4,799,762
		Planned Net Savings (kWh/yr)	0	4,013,827	4,643,845	5,068,119	13,725,791
		Annual % Toward Planned Net Savings	N/A	44.8%	36.1%	26.2%	35.0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	31	31	34	32
		Avg. Net Savings Per Participant (kWh/yr)	N/A	21	14	16	17
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	249.1	330.2	260.7	840.0
		Realization Rate Weighted by Measure	N/A	100%	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	249.1	330.2	260.7	840.0
		Net-To-Gross Rate Weighted by Measure	N/A	66%	47%	47%	53%
		Net-To-Gross Adjustment (kW)	0.0	-84.1	-175.9	-138.5	-398.5
		Net Adjusted Demand Reduction (kW)	0.0	165.0	154.3	122.2	441.5
		Planned Net Savings (kW)	0.0	51.5	59.5	65.0	176.0
		Annual % Toward Planned Net Reduction	N/A	320.6%	259.1%	188.0%	250.8%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.00	0.00	0.00	0.00
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.00	0.00	0.00	0.00
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	686.2	542.9	1,229.1
		Realization Rate Weighted by Measure	-	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	686.2	542.9	1,229.1
		Net-To-Gross Rate Weighted by Measure	-	-	47%	47%	47%
		Net-To-Gross Adjustment (kW)	-	-	-363.6	-287.1	-650.6
		Net Adjusted Demand Reduction (kW)	-	-	322.6	255.9	578.5
		Planned Net Savings (kW)	0.0	0.0	59.5	65.0	124.5
		Annual % Toward Planned Net Reduction	-	-	541.8%	393.7%	464.5%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	0.01	0.01	0.01
		Avg. Net Demand Reduction Per Participant (kW)	-	-	0.00	0.00	0.00
Measures							
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$0	\$0	\$0	\$0
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.00	\$0.00	\$0.00	\$0.00
		Cum. \$Admin. per kW (Gross)	N/A	\$48	\$52	\$51	\$51
		Cum. \$EM&V per \$Total	N/A	4.1%	4.8%	4.4%	4.4%
		Cum. \$Rebate per Participant (Gross)	N/A	\$2	\$2	\$2	\$2



P.1.2 2022 North Carolina Residential Efficient Products Marketplace Monthly Indicator Tables

Category	Measure	Indicator	2022												2019-2022		
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	
O&M (\$)	Direct Rebate		\$961	\$1,747	\$75	\$933	\$882	\$748	\$679	\$716	\$1,060	\$471	\$1,726	\$2,874	\$12,878	\$43,076	\$0
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct EM&V		\$23,005	\$41,548	\$1,768	\$22,354	\$21,124	\$17,903	\$16,263	\$17,149	\$25,397	\$11,423	\$41,345	\$68,834	\$308,435	\$933,152	\$0
	Indirect Other (Administrative)		\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792	\$52,792
	Capital (\$)		\$29,787	\$10,944	\$51,003	\$30,437	\$31,668	\$34,888	\$36,528	\$35,643	\$27,394	\$41,388	\$11,446	\$16,043	\$325,063	\$586,484	\$0
	Costs (\$)		3.6%	10.2%	10.5%	14.0%	17.4%	20.2%	22.8%	25.5%	29.5%	31.3%	37.8%	48.7%	48%	62%	\$0
	Annual % of Planned																
	Total (Gross)		5,720	5,431	6,669	7,259	6,239	4,904	5,951	4,709	8,201	11,505	9,442	8,272	84,301	287,462	\$0
	Planned		14,600	14,597	14,597	14,597	14,597	14,597	14,597	14,597	14,597	14,597	14,597	14,597	14,597	14,597	14,597
	Variance		-8,880	-9,166	-7,928	-7,338	-8,358	-9,693	-8,646	-9,888	-6,396	-3,093	-5,155	-6,325	-60,866	-186,936	\$0
Annual % of Planned (Gross)		3%	6%	10%	14%	18%	21%	24%	27%	31%	38%	43%	48%	48%	61%	\$0	
Installed kWh/year	Total Gross Energy Savings (kWh/yr)		160,645	169,880	211,472	225,784	206,727	158,667	208,576	159,384	276,756	434,032	332,038	284,519	2,828,480	9,118,085	\$0
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	\$0
	Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0
	Realization Rate Adjusted Savings (kWh/yr)		160,645	169,880	211,472	225,784	206,727	158,667	208,576	159,384	276,756	434,032	332,038	284,519	2,828,480	9,118,085	\$0
	Net-To-Gross Rate Weighted by Measure		43%	45%	46%	45%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	\$0
	Net-To-Gross Adjustment (kWh/yr)		-91,051	-94,228	-114,229	-124,209	-111,582	-85,241	-109,436	-86,505	-140,763	-220,342	-172,847	-150,817	-1,601,251	-4,318,322	\$0
	Net Adjusted Savings (kWh/yr)		69,595	75,652	97,243	101,575	95,145	73,425	99,140	72,879	135,993	213,690	159,191	133,701	1,327,228	4,799,762	\$0
	Planned Net Savings (kWh/yr)		422,423	422,336	422,336	422,336	422,336	422,336	422,336	422,336	422,336	422,336	422,336	422,336	422,336	422,336	422,336
	Annual % Toward Planned Net Savings		1.37%	2.87%	4.78%	6.76%	8.67%	10.1%	12.1%	13.5%	16.2%	20.4%	23.5%	26.2%	26.2%	35.0%	\$0
	Avg. Gross Savings Per Participant (kWh/yr)		28	31	32	31	33	32	35	34	34	34	34	35	34	34	32
Avg. Net Savings Per Participant (kWh/yr)		12	14	15	14	15	15	17	15	17	19	17	16	16	17	17	
Installed Summer peak kW	Total Gross Demand Reduction (kW)		14.9	15.8	19.6	20.8	19.1	14.6	19.2	14.9	25.3	39.9	30.5	26.2	260.7	840.0	\$0
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	\$0
	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0
	Realization Rate Adjusted Gross Demand Reduction (kW)		14.9	15.8	19.6	20.8	19.1	14.6	19.2	14.9	25.3	39.9	30.5	26.2	260.7	840.0	\$0
	Net-To-Gross Rate Weighted by Measure		43%	44%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	\$0
	Net-To-Gross Adjustment (kW)		-8.5	-8.8	-10.6	-11.4	-10.3	-7.8	-10.1	-8.1	-12.9	-20.3	-15.9	-13.9	-136.5	-388.5	\$0
	Net Adjusted Demand Reduction (kW)		6.4	7.0	9.0	9.3	8.8	6.7	9.1	6.8	12.5	19.6	14.6	12.3	122.2	441.5	\$0
	Planned Net Savings (kW)		5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	\$0
	Annual % Toward Planned Net Reduction		9.92%	20.7%	34.5%	48.9%	62.4%	72.8%	86.8%	97.3%	116.4%	146.6%	169.1%	188.0%	188.0%	250.8%	\$0
	Avg. Gross Demand Reduction Per Participant (kW)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	\$0
Avg. Net Demand Reduction Per Participant (kW)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	\$0	
Installed Winter peak kW	Total Gross Demand Reduction (kW)		30.1	31.7	40.3	43.6	39.2	30.7	40.4	29.5	54.0	84.1	64.4	55.0	543.9	1,229.1	\$0
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	\$0
	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0
	Realization Rate Adjusted Gross Demand Reduction (kW)		30.1	31.7	40.3	43.6	39.2	30.7	40.4	29.5	54.0	84.1	64.4	55.0	543.9	1,229.1	\$0
	Net-To-Gross Rate Weighted by Measure		44%	45%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	\$0
	Net-To-Gross Adjustment (kW)		-17.0	-17.5	-21.7	-23.9	-21.0	-16.5	-21.1	-15.9	-27.4	-42.6	-33.5	-29.1	-287.1	-650.6	\$0
	Net Adjusted Demand Reduction (kW)		13.1	14.3	18.6	19.7	18.1	14.2	19.2	13.7	26.6	41.5	30.9	25.9	256.9	578.5	\$0
	Planned Net Savings (kW)		5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	\$0
	Annual % Toward Planned Net Reduction		20.2%	42.2%	70.8%	101.0%	129.0%	150.9%	180.5%	201.5%	242.4%	306.3%	353.9%	393.7%	393.7%	464.5%	\$0
	Avg. Gross Demand Reduction Per Participant (kW)		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	\$0
Avg. Net Demand Reduction Per Participant (kW)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	\$0	
Program Performance	Cum. \$Admin. per Participant (Gross)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Cum. \$Admin. per kWh/year (Gross)		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Cum. \$Admin. per kW (Gross)		\$52	\$54	\$52	\$52	\$52	\$52	\$52	\$52	\$51	\$49	\$49	\$51	\$51	\$51	
	Cum. \$EM&V per \$Total		4.5%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	
	Cum. \$Rebate per Participant (Gross)		\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	



P.1.3 2020-2022 North Carolina Residential Efficient Products Marketplace Measure Indicator Tables

NC - Residential Efficient Products Marketplace Program			2019	2020	2021	2019-2022
Measures						
	Fixture and Retrofit Kit	Total Participants	0	8,749	11,802	35,425
Installed kWh/year	Fixture and Retrofit Kit	Total Gross Energy Savings (kWh/yr)	0	378,714	471,631	1,446,401
	Fixture and Retrofit Kit	Net Adjusted Savings (kWh/yr)	0	227,229	245,248	782,426
Installed Summer peak kW	Fixture and Retrofit Kit	Total Gross Demand Reduction (kW)	0.0	34.6	43.1	132.3
	Fixture and Retrofit Kit	Net Adjusted Demand Reduction (kW)	0.0	20.8	22.4	71.6
Installed Winter peak kW	Fixture and Retrofit Kit	Total Gross Demand Reduction (kW)	-	-	92.2	208.8
	Fixture and Retrofit Kit	Net Adjusted Demand Reduction (kW)	-	-	48.0	108.6
	Reflector	Total Participants	0	32,818	35,768	89,085
Installed kWh/year	Reflector	Total Gross Energy Savings (kWh/yr)	0	1,190,927	1,270,877	3,209,352
	Reflector	Net Adjusted Savings (kWh/yr)	0	905,105	698,982	2,015,238
Installed Summer peak kW	Reflector	Total Gross Demand Reduction (kW)	0.0	109.0	116.3	293.6
	Reflector	Net Adjusted Demand Reduction (kW)	0.0	82.8	63.9	184.4
Installed Winter peak kW	Reflector	Total Gross Demand Reduction (kW)	-	-	248.6	394.8
	Reflector	Net Adjusted Demand Reduction (kW)	-	-	136.7	217.1
	Specialty	Total Participants	0	44,501	68,259	159,009
Installed kWh/year	Specialty	Total Gross Energy Savings (kWh/yr)	0	1,080,701	1,740,732	4,112,497
	Specialty	Net Adjusted Savings (kWh/yr)	0	637,614	696,293	1,850,332
Installed Summer peak kW	Specialty	Total Gross Demand Reduction (kW)	0.0	98.9	159.3	376.2
	Specialty	Net Adjusted Demand Reduction (kW)	0.0	58.3	63.7	169.3
Installed Winter peak kW	Specialty	Total Gross Demand Reduction (kW)	-	-	340.5	593.0
	Specialty	Net Adjusted Demand Reduction (kW)	-	-	136.2	237.2

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NC - Residential Efficient Products Marketplace Program			2019	2020	2021	2019-2022
Measures						
	ENERGY STAR Dehumidifier	Total Participants	0	7	17	40
Installed kWh/year	ENERGY STAR Dehumidifier	Total Gross Energy Savings (kWh/yr)	0	739	1,808	4,166
	ENERGY STAR Dehumidifier	Net Adjusted Savings (kWh/yr)	0	451	977	2,301
Installed Summer peak kW	ENERGY STAR Dehumidifier	Total Gross Demand Reduction (kW)	0.0	0.2	0.4	0.9
	ENERGY STAR Dehumidifier	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.2	0.5
Installed Winter peak kW	ENERGY STAR Dehumidifier	Total Gross Demand Reduction (kW)	-	-	0.0	0.0
	ENERGY STAR Dehumidifier	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0
	ENERGY STAR Dishwasher	Total Participants	0	94	175	427
Installed kWh/year	ENERGY STAR Dishwasher	Total Gross Energy Savings (kWh/yr)	0	3,427	6,377	15,588
	ENERGY STAR Dishwasher	Net Adjusted Savings (kWh/yr)	0	1,748	2,359	6,247
Installed Summer peak kW	ENERGY STAR Dishwasher	Total Gross Demand Reduction (kW)	0.0	0.4	0.8	1.9
	ENERGY STAR Dishwasher	Net Adjusted Demand Reduction (kW)	0.0	0.2	0.3	0.8
Installed Winter peak kW	ENERGY STAR Dishwasher	Total Gross Demand Reduction (kW)	-	-	0.2	0.3
	ENERGY STAR Dishwasher	Net Adjusted Demand Reduction (kW)	-	-	0.1	0.1
	ENERGY STAR Freezer	Total Participants	0	2	10	23
Installed kWh/year	ENERGY STAR Freezer	Total Gross Energy Savings (kWh/yr)	0	110	431	1,097
	ENERGY STAR Freezer	Net Adjusted Savings (kWh/yr)	0	57	168	442
Installed Summer peak kW	ENERGY STAR Freezer	Total Gross Demand Reduction (kW)	0.0	0.0	0.1	0.2
	ENERGY STAR Freezer	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.1
Installed Winter peak kW	ENERGY STAR Freezer	Total Gross Demand Reduction (kW)	-	-	0.0	0.0
	ENERGY STAR Freezer	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0
	ENERGY STAR Refrigerator	Total Participants	0	97	213	466
Installed kWh/year	ENERGY STAR Refrigerator	Total Gross Energy Savings (kWh/yr)	0	6,041	13,431	29,931
	ENERGY STAR Refrigerator	Net Adjusted Savings (kWh/yr)	0	2,356	5,238	11,673
Installed Summer peak kW	ENERGY STAR Refrigerator	Total Gross Demand Reduction (kW)	0.0	1.0	2.2	4.8
	ENERGY STAR Refrigerator	Net Adjusted Demand Reduction (kW)	0.0	0.4	0.8	1.9
Installed Winter peak kW	ENERGY STAR Refrigerator	Total Gross Demand Reduction (kW)	-	-	0.6	1.1
	ENERGY STAR Refrigerator	Net Adjusted Demand Reduction (kW)	-	-	0.2	0.4



NC - Residential Efficient Products Marketplace Program			2019	2020	2021	2019-2022
Measures						
	A-Line	Total Participants	0	0	16	2,072
Installed kWh/year	A-Line	Total Gross Energy Savings (kWh/yr)	0	0	584	124,029
	A-Line	Net Adjusted Savings (kWh/yr)	0	0	304	64,495
Installed Summer peak kW	A-Line	Total Gross Demand Reduction (kW)	0.0	0.0	0.1	11.3
	A-Line	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	5.9
Installed Winter peak kW	A-Line	Total Gross Demand Reduction (kW)	-	-	0.1	24.3
	A-Line	Net Adjusted Demand Reduction (kW)	-	-	0.1	12.6
	ENERGY STAR Air Purifier	Total Participants	0	10	11	38
Installed kWh/year	ENERGY STAR Air Purifier	Total Gross Energy Savings (kWh/yr)	0	6,630	1,408	9,917
	ENERGY STAR Air Purifier	Net Adjusted Savings (kWh/yr)	0	4,575	760	6,350
Installed Summer peak kW	ENERGY STAR Air Purifier	Total Gross Demand Reduction (kW)	0.0	0.8	0.2	1.1
	ENERGY STAR Air Purifier	Net Adjusted Demand Reduction (kW)	0.0	0.5	0.1	0.7
Installed Winter peak kW	ENERGY STAR Air Purifier	Total Gross Demand Reduction (kW)	-	-	0.2	0.4
	ENERGY STAR Air Purifier	Net Adjusted Demand Reduction (kW)	-	-	0.1	0.2
	ENERGY STAR Clothes Dryer	Total Participants	0	98	168	376
Installed kWh/year	ENERGY STAR Clothes Dryer	Total Gross Energy Savings (kWh/yr)	0	17,087	29,620	66,101
	ENERGY STAR Clothes Dryer	Net Adjusted Savings (kWh/yr)	0	7,177	11,256	25,802
Installed Summer peak kW	ENERGY STAR Clothes Dryer	Total Gross Demand Reduction (kW)	0.0	1.7	3.0	6.6
	ENERGY STAR Clothes Dryer	Net Adjusted Demand Reduction (kW)	0.0	0.7	1.1	2.6
Installed Winter peak kW	ENERGY STAR Clothes Dryer	Total Gross Demand Reduction (kW)	-	-	1.4	2.4
	ENERGY STAR Clothes Dryer	Net Adjusted Demand Reduction (kW)	-	-	0.5	0.9
	ENERGY STAR Clothes Washer	Total Participants	0	117	230	501
Installed kWh/year	ENERGY STAR Clothes Washer	Total Gross Energy Savings (kWh/yr)	0	23,116	45,214	99,006
	ENERGY STAR Clothes Washer	Net Adjusted Savings (kWh/yr)	0	10,171	14,469	34,456
Installed Summer peak kW	ENERGY STAR Clothes Washer	Total Gross Demand Reduction (kW)	0.0	2.5	4.9	10.8
	ENERGY STAR Clothes Washer	Net Adjusted Demand Reduction (kW)	0.0	1.1	1.6	3.8
Installed Winter peak kW	ENERGY STAR Clothes Washer	Total Gross Demand Reduction (kW)	-	-	2.4	4.0
	ENERGY STAR Clothes Washer	Net Adjusted Demand Reduction (kW)	-	-	0.8	1.3

P.1.4 2020-2022 North Carolina Residential Efficient Products Marketplace Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
REEC	Not available	17	25	68%	Not Available	Not Available
REEC	Schedule 1	17	25	68%	15,263	0%
REEC	Schedule 1T	19	25	77%	20,599	0%
REEC	Schedule 1DF	28	25	115%	Not Available	Not Available
REEC	Schedule 1	21	25	86%	12,661	0%
REEC	Schedule 1P	33	25	136%	31,241	0%



P.2 North Carolina Residential Energy Efficiency Kits Program 2020-2022

P.2.1 2020-2022 North Carolina Residential Energy Efficiency Kits Program Annual Indicator Tables

NC - Residential Kits Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$0	\$2,678	\$2,899	\$5,577
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$57,116	\$69,433	\$126,549
Costs (\$)		Planned	\$0	\$121,351	\$122,877	\$244,228
Costs (\$)		Variance	\$0	-\$64,235	-\$53,444	-\$117,679
		Annual % of Planned	N/A	47%	57%	52%
Participants ¹		Total (Gross)	0	1,264	1,453	2,717
		Planned	0	1,800	1,800	3,600
		Variance	0	-536	-347	-883
		Annual % of Planned (Gross)	N/A	70%	81%	75%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	159,580	182,428	342,008
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	159,580	182,428	342,008
		Net-To-Gross Rate Weighted by Measure	N/A	60%	60%	60%
		Net-To-Gross Adjustment (kWh/yr)	0	-63,832	-72,971	-136,803
		Net Adjusted Savings (kWh/yr)	0	95,748	109,457	205,205
		Planned Net Savings (kWh/yr)	0	476,131	476,131	952,261
		Annual % Toward Planned Net Savings	N/A	20.1%	23.0%	21.5%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	126	126	126
		Avg. Net Savings Per Participant (kWh/yr)	N/A	76	75	76
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	13.9	16.3	30.2
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	13.9	16.3	30.2
		Net-To-Gross Rate Weighted by Measure	N/A	60%	60%	60%
		Net-To-Gross Adjustment (kW)	0.0	-5.6	-6.5	-12.1
		Net Adjusted Demand Reduction (kW)	0.0	8.4	9.8	18.1
		Planned Net Savings (kW)	0.0	42.2	42.2	84.5
		Annual % Toward Planned Net Reduction	N/A	19.8%	23.1%	21.4%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.01	0.01	0.01
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.01	0.01	0.01
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	15.2	17.9	33.1
		Realization Rate Weighted by Measure	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	15.2	17.9	33.1
		Net-To-Gross Rate Weighted by Measure	-	60%	60%	60%
		Net-To-Gross Adjustment (kW)	-	-6.1	-7.2	-13.3
		Net Adjusted Demand Reduction (kW)	-	9.1	10.7	19.9
		Planned Net Savings (kW)	0.0	41.7	41.7	83.4
		Annual % Toward Planned Net Reduction	-	21.9%	25.7%	23.8%
		Avg. Gross Demand Reduction Per Participant (kW)	-	0.01	0.01	0.01
		Avg. Net Demand Reduction Per Participant (kW)	-	0.01	0.01	0.01
Measures						
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$2	\$2	\$2
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.02	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	N/A	\$192	\$185	\$185
		Cum. \$EM&V per \$Total	N/A	4.8%	8.0%	8.0%
		Cum. \$Rebate per Participant (Gross)	N/A	\$30	\$30	\$30



P.2.2 2022 North Carolina Residential Energy Efficiency Kits Program Monthly Indicator Tables

Category	Measure	Indicator	2022												2020-2022 Total		
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC			
O&M (\$)	Direct Rebate		\$49	\$116	\$466	\$98	\$64	\$401	\$292	\$147	\$653	\$101	\$437	\$76	\$2,899	\$5,577	
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Direct EM&V		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Direct Other (Administrative)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Capital (\$)	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)	Total		\$1,183	\$2,766	\$11,157	\$2,335	\$1,532	\$9,611	\$6,983	\$3,511	\$15,647	\$2,419	\$10,478	\$1,811	\$69,433	\$126,549	
	Planned		\$10,240	\$10,240	\$10,240	\$10,240	\$10,240	\$10,240	\$10,240	\$10,240	\$10,240	\$10,240	\$10,240	\$10,240	\$10,240	\$122,871	\$244,228
Costs (\$)	Variance		-\$9,057	-\$7,473	\$917	\$7,905	-\$6,707	-\$6,299	-\$3,257	-\$6,729	\$5,407	-\$7,821	\$238	-\$8,429	-\$53,444	-\$117,679	
	Annual % of Planned		1.0%	3.2%	12.3%	14.2%	15.4%	23.3%	28.9%	31.8%	44.5%	46.5%	55.0%	56.5%	57%	52%	
Participants*	Total (Gross)		0	0	289	1	0	242	180	1	468	0	272	0	1,463	2,717	
	Planned		150	150	150	150	150	150	150	150	150	150	150	150	1,800	3,600	
	Variance		-150	-150	139	-149	-150	92	-30	-149	318	-150	122	-150	-347	-883	
	Annual % of Planned (Gross)		0%	0%	16%	16%	16%	30%	40%	40%	66%	66%	81%	81%	81%	75%	
Installed kWh/year	Total		396	0	35,887	2,437	0	27,165	23,562	7,344	52,533	0	33,104	0	182,428	342,008	
	Realization Rate Weighted by Measure		100%	N/A	100%	100%	N/A	100%	100%	100%	100%	100%	N/A	100%	N/A	100%	
	Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Adjusted Savings (kWh/yr)		396	0	35,887	2,437	0	27,165	23,562	7,344	52,533	0	33,104	0	182,428	342,008	
	Net-To-Gross Rate Weighted by Measure		60%	N/A	60%	60%	N/A	60%	60%	60%	60%	60%	N/A	60%	N/A	60%	
	Net-To-Gross Adjustment (kWh/yr)		-158	0	-14,355	-975	0	-10,866	-9,425	-2,938	-21,013	0	-13,242	0	-72,971	-136,903	
	Net Adjusted Savings (kWh/yr)		238	0	21,532	1,462	0	16,299	14,137	4,407	31,520	0	19,863	0	109,457	205,205	
	Planned Net Savings (kWh/yr)		39,678	39,678	39,678	39,678	39,678	39,678	39,678	39,678	39,678	39,678	39,678	39,678	39,678	476,131	952,261
	Annual % Toward Planned Net Savings		0.05%	0.05%	4.57%	4.88%	8.30%	11.3%	12.2%	18.8%	18.8%	23.0%	23.0%	23.0%	23.0%	23.0%	21.5%
	Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	124	2,437	N/A	112	131	7,344	112	N/A	122	N/A	126	126	126
	Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	75	1,462	N/A	67	79	4,407	67	N/A	73	N/A	75	75	76
	Installed Summer peak kW	Total		0.0	0.0	3.2	0.3	0.0	2.4	2.1	0.7	4.6	0.0	2.9	0.0	16.3	30.2
		Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realization Rate Adjustment (kW)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Realization Rate Adjusted Gross Demand Reduction (kW)			0.0	0.0	3.2	0.3	0.0	2.4	2.1	0.7	4.6	0.0	2.9	0.0	16.3	30.2	
Net-To-Gross Rate Weighted by Measure			60%	100%	60%	60%	100%	60%	60%	60%	60%	60%	60%	60%	60%	60%	
Net-To-Gross Adjustment (kW)			0.0	0.0	-1.3	-0.1	0.0	-1.0	-0.9	-0.3	-1.8	0.0	-1.2	0.0	-6.5	-12.1	
Net Adjusted Demand Reduction (kW)			0.0	0.0	1.9	0.2	0.0	1.4	1.3	0.4	2.8	0.0	1.8	0.0	9.8	18.1	
Planned Net Savings (kW)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	42.2		
Annual % Toward Planned Net Reduction		0.05%	0.05%	4.58%	4.96%	8.36%	11.4%	12.4%	18.9%	18.9%	23.1%	23.1%	23.1%	23.1%	21.4%		
Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	0.01	0.27	N/A	0.01	0.01	0.01	0.69	0.01	N/A	0.01	N/A	0.01		
Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	0.01	0.2	N/A	0.01	0.01	0.4	0.01	N/A	0.01	N/A	0.01	0.01		
Installed Winter peak kW	Total		0.1	0.0	3.4	0.6	0.0	2.4	2.6	1.2	4.6	0.0	3.1	0.0	17.9	33.1	
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.1	0.0	3.4	0.6	0.0	2.4	2.6	1.2	4.6	0.0	3.1	0.0	17.9	33.1	
	Net-To-Gross Rate Weighted by Measure		60%	100%	60%	60%	100%	60%	60%	60%	60%	60%	60%	60%	60%	60%	
	Net-To-Gross Adjustment (kW)		0.0	0.0	-1.3	-0.2	0.0	-1.0	-1.0	-0.5	-1.8	0.0	-1.2	0.0	-7.2	-13.3	
	Net Adjusted Demand Reduction (kW)		0.0	0.0	2.0	0.4	0.0	1.4	1.5	0.7	2.8	0.0	1.9	0.0	10.7	19.9	
Planned Net Savings (kW)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	41.7		
Annual % Toward Planned Net Reduction		0.10%	0.10%	4.94%	5.79%	9.29%	12.9%	14.7%	21.3%	21.3%	25.7%	25.7%	25.7%	23.8%	23.8%		
Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	0.01	0.6	N/A	0.01	0.01	1.2	0.01	N/A	0.01	N/A	0.01	0.01		
Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	0.01	0.4	N/A	0.01	0.01	0.7	0.01	N/A	0.01	N/A	0.01	0.01		
Program Performance	Cum. \$Admin. per Participant (Gross)		\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	
	Cum. \$Admin. per kWh/year (Gross)		\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	
	Cum. \$Admin. per kW (Gross)		\$195	\$204	\$193	\$196	\$199	\$196	\$190	\$182	\$186	\$182	\$185	\$185	\$185	\$185	
	Cum. \$EM&V per \$ Total		4.7%	6.9%	6.6%	7.5%	8.0%	8.1%	7.5%	8.0%	8.1%	7.7%	8.1%	8.0%	8.0%	8.0%	
Cum. \$Rebate per Participant (Gross)		\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30		



P.2.3 2021-2022 North Carolina Residential Energy Efficiency Kits Program
Measure Indicator Tables

NC - Residential Kits Program			2020	2021	2022	2020-2022
Measures						
	Window Weatherstripping	Total Participants	0	7	19	26
Installed kWh/year	Window Weatherstripping	Total Gross Energy Savings (kWh/yr)	0	118	54	172
	Window Weatherstripping	Net Adjusted Savings (kWh/yr)	0	71	32	103
Installed Summer peak kW	Window Weatherstripping	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Window Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Window Weatherstripping	Total Gross Demand Reduction (kW)	-	0.2	0.1	0.2
	Window Weatherstripping	Net Adjusted Demand Reduction (kW)	-	0.1	0.0	0.1

NC - Residential Kits Program			2020	2021	2022	2020-2022
Measures						
	Lighting	Total Participants	0	20	23	43
Installed kWh/year	Lighting	Total Gross Energy Savings (kWh/yr)	0	6,148	7,282	13,431
	Lighting	Net Adjusted Savings (kWh/yr)	0	3,689	4,369	8,058
Installed Summer peak kW	Lighting	Total Gross Demand Reduction (kW)	0.0	0.6	0.7	1.2
	Lighting	Net Adjusted Demand Reduction (kW)	0.0	0.3	0.4	0.7
Installed Winter peak kW	Lighting	Total Gross Demand Reduction (kW)	-	1.2	1.4	2.6
	Lighting	Net Adjusted Demand Reduction (kW)	-	0.7	0.9	1.6
	Outlet/Switch Gaskets	Total Participants	0	7	19	26
Installed kWh/year	Outlet/Switch Gaskets	Total Gross Energy Savings (kWh/yr)	0	15	41	57
	Outlet/Switch Gaskets	Net Adjusted Savings (kWh/yr)	0	9	25	34
Installed Summer peak kW	Outlet/Switch Gaskets	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Outlet/Switch Gaskets	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Outlet/Switch Gaskets	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.1
	Outlet/Switch Gaskets	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Smart Strips	Total Participants	0	1,264	1,453	2,717
Installed kWh/year	Smart Strips	Total Gross Energy Savings (kWh/yr)	0	141,884	164,874	306,758
	Smart Strips	Net Adjusted Savings (kWh/yr)	0	85,130	98,924	184,055
Installed Summer peak kW	Smart Strips	Total Gross Demand Reduction (kW)	0.0	12.5	14.5	27.0
	Smart Strips	Net Adjusted Demand Reduction (kW)	0.0	7.5	8.7	16.2
Installed Winter peak kW	Smart Strips	Total Gross Demand Reduction (kW)	-	12.5	14.5	27.0
	Smart Strips	Net Adjusted Demand Reduction (kW)	-	7.5	8.7	16.2
	Water Distribution	Total Participants	0	17	18	35
Installed kWh/year	Water Distribution	Total Gross Energy Savings (kWh/yr)	0	6,799	6,064	12,863
	Water Distribution	Net Adjusted Savings (kWh/yr)	0	4,079	3,639	7,718
Installed Summer peak kW	Water Distribution	Total Gross Demand Reduction (kW)	0.0	0.3	0.3	0.7
	Water Distribution	Net Adjusted Demand Reduction (kW)	0.0	0.2	0.2	0.4
Installed Winter peak kW	Water Distribution	Total Gross Demand Reduction (kW)	-	0.3	0.3	0.7
	Water Distribution	Net Adjusted Demand Reduction (kW)	-	0.2	0.2	0.4



NC - Residential Kits Program			2020	2021	2022	2020-2022
Measures						
	Caulking per Tube	Total Participants	0	7	19	26
Installed kWh/year	Caulking per Tube	Total Gross Energy Savings (kWh/yr)	0	40	108	148
	Caulking per Tube	Net Adjusted Savings (kWh/yr)	0	24	65	89
Installed Summer peak kW	Caulking per Tube	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Caulking per Tube	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Caulking per Tube	Total Gross Demand Reduction (kW)	-	0.0	0.1	0.2
	Caulking per Tube	Net Adjusted Demand Reduction (kW)	-	0.0	0.1	0.1
	Door Sweep	Total Participants	0	7	19	26
Installed kWh/year	Door Sweep	Total Gross Energy Savings (kWh/yr)	0	299	807	1,106
	Door Sweep	Net Adjusted Savings (kWh/yr)	0	179	484	663
Installed Summer peak kW	Door Sweep	Total Gross Demand Reduction (kW)	0.0	0.1	0.3	0.4
	Door Sweep	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.2	0.2
Installed Winter peak kW	Door Sweep	Total Gross Demand Reduction (kW)	-	0.3	1.0	1.3
	Door Sweep	Net Adjusted Demand Reduction (kW)	-	0.2	0.6	0.8
	Door Weatherstripping	Total Participants	0	7	19	26
Installed kWh/year	Door Weatherstripping	Total Gross Energy Savings (kWh/yr)	0	187	54	241
	Door Weatherstripping	Net Adjusted Savings (kWh/yr)	0	112	32	144
Installed Summer peak kW	Door Weatherstripping	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Door Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Door Weatherstripping	Total Gross Demand Reduction (kW)	-	0.2	0.1	0.3
	Door Weatherstripping	Net Adjusted Demand Reduction (kW)	-	0.1	0.0	0.2
	Hot Water Pipe Insulation	Total Participants	0	17	18	35
Installed kWh/year	Hot Water Pipe Insulation	Total Gross Energy Savings (kWh/yr)	0	4,090	3,144	7,235
	Hot Water Pipe Insulation	Net Adjusted Savings (kWh/yr)	0	2,454	1,886	4,341
Installed Summer peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	0.0	0.5	0.4	0.8
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.0	0.3	0.2	0.5
Installed Winter peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	-	0.5	0.4	0.8
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	-	0.3	0.2	0.5



P.2.4 2021-2022 North Carolina Residential Energy Efficiency Kits Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RKTS	Not available	76	660	11%	Not Available	Not Available
RKTS	Schedule 1	76	660	11%	15,263	0%
RKTS	Schedule 1P	67	660	10%	31,241	0%
RKTS	Schedule 1W	67	660	10%	Not Available	Not Available



P.3 North Carolina Residential Smart Thermostat Purchase and WeatherSmart Program 2021-2022

P.3.1 2021-2022 North Carolina Residential Smart Thermostat Purchase and WeatherSmart Program Annual Indicator Tables

NC - Residential Thermostat Purchase and WeatherSmart Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$900	\$2,125	\$3,025
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$19,202	\$50,894	\$70,096
Costs (\$)		Planned	\$73,197	\$76,014	\$149,210
Costs (\$)		Variance	-\$53,995	-\$25,119	-\$79,114
		Annual % of Planned	26%	67%	47%
Participants ¹		Total (Gross)	71	265	336
		Planned	306	589	895
		Variance	-235	-324	-559
		Annual % of Planned (Gross)	23%	45%	38%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	18,008	76,560	94,568
		Realization Rate Weighted by Measure	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	18,008	76,560	94,568
		Net-To-Gross Rate Weighted by Measure	85%	82%	83%
		Net-To-Gross Adjustment (kWh/yr)	-2,781	-13,732	-16,514
		Net Adjusted Savings (kWh/yr)	15,227	62,828	78,055
		Planned Net Savings (kWh/yr)	115,978	222,263	338,242
		Annual % Toward Planned Net Savings	13.1%	28.3%	23.1%
		Avg. Gross Savings Per Participant (kWh/yr)	254	289	281
		Avg. Net Savings Per Participant (kWh/yr)	214	237	232
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	4.6	9.0	13.7
		Realization Rate Weighted by Measure	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	4.6	9.0	13.7
		Net-To-Gross Rate Weighted by Measure	95%	95%	95%
		Net-To-Gross Adjustment (kW)	-0.2	-0.5	-0.7
		Net Adjusted Demand Reduction (kW)	4.4	8.6	13.0
		Planned Net Savings (kW)	12.6	24.3	36.9
		Annual % Toward Planned Net Reduction	34.9%	35.3%	35.2%
		Avg. Gross Demand Reduction Per Participant (kW)	0.07	0.03	0.04
		Avg. Net Demand Reduction Per Participant (kW)	0.06	0.03	0.04
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	1.2	2.2	3.4
		Realization Rate Weighted by Measure	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	1.2	2.2	3.4
		Net-To-Gross Rate Weighted by Measure	95%	95%	95%
		Net-To-Gross Adjustment (kW)	-0.1	-0.1	-0.2
		Net Adjusted Demand Reduction (kW)	1.1	2.1	3.2
		Planned Net Savings (kW)	30.6	58.9	89.5
		Annual % Toward Planned Net Reduction	3.66%	3.61%	3.63%
		Avg. Gross Demand Reduction Per Participant (kW)	0.02	0.01	0.01
		Avg. Net Demand Reduction Per Participant (kW)	0.02	0.01	0.01
Program Performance		Cum. \$Admin. per Participant (Gross)	\$13	\$9	\$9
		Cum. \$Admin. per kWh/year (Gross)	\$0.05	\$0.03	\$0.03
		Cum. \$Admin. per kW (Gross)	\$194	\$221	\$221
		Cum. \$EM&V per \$Total	10.5%	14.1%	14.1%
		Cum. \$Rebate per Participant (Gross)	\$61	\$69	\$69



P.3.2 2022 North Carolina Residential Smart Thermostat Purchase and WeatherSmart Program Monthly Indicator Tables

NC - Residential Thermostat Purchase and WeatherSmart Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2021-2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	
O&M (\$)		Direct Rebate															
O&M (\$)		Direct Implementation															
O&M (\$)		Direct EM&V															
O&M (\$)		Indirect Other (Administrative)	\$120	\$129	\$124	\$125	\$127	\$165	\$257	\$443	\$210	\$172	\$165	\$89	\$2,125	\$3,025	
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)		Total	\$2,876	\$3,096	\$2,967	\$3,002	\$3,042	\$3,945	\$6,146	\$10,615	\$5,021	\$4,112	\$3,942	\$2,131	\$50,894	\$70,096	
Costs (\$)		Planned	\$6,334	\$6,334	\$6,334	\$6,334	\$6,334	\$6,334	\$6,334	\$6,334	\$6,334	\$6,334	\$6,334	\$6,334	\$76,014	\$149,210	
Costs (\$)		Variance	-\$3,459	-\$3,238	-\$3,367	-\$3,332	-\$3,293	-\$2,390	-\$189	\$4,280	-\$1,313	-\$2,222	-\$2,392	-\$4,204	-\$25,119	-\$79,114	
		Annual % of Planned	3.8%	7.9%	11.8%	15.7%	19.7%	24.9%	33.0%	46.9%	53.6%	59.0%	64.2%	67.0%	67%	47%	
Participants ¹		Total (Gross)	10	10	11	5	26	16	48	43	29	20	29	18	265	336	
		Planned	50	49	49	49	49	49	49	49	49	49	49	49	589	895	
		Variance	-40	-39	-38	-44	-23	-33	-1	-6	-20	-29	-20	-31	-324	-559	
		Annual % of Planned (Gross)	2%	3%	5%	6%	11%	13%	21%	29%	34%	37%	42%	45%	45%	38%	
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	3,602	2,676	3,131	1,954	6,547	4,112	15,962	13,960	7,289	6,257	6,589	4,479	76,560	94,568	
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Realization Rate Adjusted Savings (kWh/yr)	3,602	2,676	3,131	1,954	6,547	4,112	15,962	13,960	7,289	6,257	6,589	4,479	76,560	94,568	
		Net-To-Gross Rate Weighted by Measure	79%	84%	81%	75%	89%	83%	81%	79%	84%	81%	83%	86%	82%	83%	
		Net-To-Gross Adjustment (kWh/yr)	-757	-441	-588	-482	-712	-694	-3,102	-2,885	-1,151	-1,176	-1,097	-646	-13,732	-16,514	
		Net Adjusted Savings (kWh/yr)	2,845	2,235	2,543	1,472	5,835	3,418	12,860	11,076	6,138	5,080	5,492	3,833	62,828	78,055	
		Planned Net Savings (kWh/yr)	18,868	18,490	18,490	18,490	18,490	18,490	18,490	18,490	18,490	18,490	18,490	18,490	222,263	338,242	
		Annual % Toward Planned Net Savings	1.28%	2.29%	3.43%	4.09%	6.72%	8.26%	14.0%	19.0%	21.8%	24.1%	26.5%	28.3%	28.3%	23.1%	
		Avg. Gross Savings Per Participant (kWh/yr)	360	268	285	391	252	257	333	325	251	313	227	249	289	281	
		Avg. Net Savings Per Participant (kWh/yr)	285	223	231	294	224	214	268	258	212	254	189	213	237	232	
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	-0.2	0.5	0.2	-0.5	3.3	0.7	0.6	-0.5	1.9	0.5	1.3	1.3	9.0	13.7	
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	-0.2	0.5	0.2	-0.5	3.3	0.7	0.6	-0.5	1.9	0.5	1.3	1.3	9.0	13.7	
		Net-To-Gross Rate Weighted by Measure	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.5	-0.7	
		Net Adjusted Demand Reduction (kW)	-0.2	0.5	0.2	-0.5	3.2	0.7	0.5	-0.5	1.8	0.4	1.2	1.2	8.6	13.0	
		Planned Net Savings (kW)	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	24.3	36.9	
		Annual % Toward Planned Net Reduction	-0.77%	1.32%	2.16%	0.09%	13.1%	15.8%	18.0%	16.0%	23.4%	25.3%	30.2%	35.3%	35.3%	35.2%	
		Avg. Gross Demand Reduction Per Participant (kW)	-0.02	0.05	0.02	-0.11	0.13	0.04	0.01	-0.01	0.07	0.02	0.04	0.07	0.03	0.04	
		Avg. Net Demand Reduction Per Participant (kW)	-0.02	0.05	0.02	-0.10	0.1	0.04	0.01	-0.01	0.06	0.02	0.04	0.07	0.03	0.04	
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-0.1	0.1	0.1	-0.1	0.9	0.2	0.1	-0.1	0.4	0.1	0.3	0.4	2.2	3.4	
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	-0.1	0.1	0.1	-0.1	0.9	0.2	0.1	-0.1	0.4	0.1	0.3	0.4	2.2	3.4	
		Net-To-Gross Rate Weighted by Measure	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2	
		Net Adjusted Demand Reduction (kW)	-0.1	0.1	0.1	-0.1	0.8	0.2	0.1	-0.1	0.4	0.1	0.3	0.4	2.1	3.2	
		Planned Net Savings (kW)	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	58.9	89.5	
		Annual % Toward Planned Net Reduction	-0.09%	0.13%	0.22%	0.01%	14.2%	1.73%	1.91%	1.70%	2.33%	2.48%	2.99%	3.61%	3.61%	3.63%	
		Avg. Gross Demand Reduction Per Participant (kW)	-0.01	0.01	0.01	-0.03	0.03	0.01	0.00	0.00	0.01	0.00	0.01	0.02	0.01	0.01	
		Avg. Net Demand Reduction Per Participant (kW)	-0.01	0.01	0.00	-0.02	0.03	0.01	0.00	0.00	0.01	0.00	0.01	0.02	0.01	0.01	
Program Performance		Cum. \$Admin. per Participant (Gross)	\$13	\$13	\$12	\$13	\$11	\$11	\$10	\$10	\$10	\$10	\$9	\$9	\$9	\$9	
		Cum. \$Admin. per kWh/year (Gross)	\$0.05	\$0.05	\$0.05	\$0.05	\$0.04	\$0.04	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	
		Cum. \$Admin. per kW (Gross)	\$230	\$231	\$246	\$300	\$191	\$195	\$211	\$274	\$245	\$250	\$238	\$221	\$221	\$221	
		Cum. \$EM&V per \$Total	9.2%	10.8%	11.1%	12.1%	12.6%	13.9%	12.0%	13.2%	14.0%	14.1%	14.6%	14.1%	14.1%	14.1%	
		Cum. \$Rebate per Participant (Gross)	\$67	\$68	\$71	\$74	\$65	\$65	\$70	\$75	\$73	\$73	\$71	\$69	\$69	\$69	



P.3.3 2021-2022 North Carolina Residential Smart Thermostat Purchase and WeatherSmart Program Measure Indicator Tables

NC - Residential Thermostat Purchase and WeatherSmart Program			2021	2022	2021-2022
Measures					
	Smart Thermostat Purchase	Total Participants	44	215	259
Installed kWh/year	Smart Thermostat Purchase	Total Gross Energy Savings (kWh/yr)	12,538	66,029	78,568
	Smart Thermostat Purchase	Net Adjusted Savings (kWh/yr)	10,031	52,824	62,854
Installed Summer peak kW	Smart Thermostat Purchase	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Smart Thermostat Purchase	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
Installed Winter peak kW	Smart Thermostat Purchase	Total Gross Demand Reduction (kW)	0.0	0.0	0.0
	Smart Thermostat Purchase	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0
	WeatherSmart	Total Participants	27	50	77
Installed kWh/year	WeatherSmart	Total Gross Energy Savings (kWh/yr)	5,469	10,531	16,000
	WeatherSmart	Net Adjusted Savings (kWh/yr)	5,196	10,004	15,200
Installed Summer peak kW	WeatherSmart	Total Gross Demand Reduction (kW)	4.6	9.0	13.7
	WeatherSmart	Net Adjusted Demand Reduction (kW)	4.4	8.6	13.0
Installed Winter peak kW	WeatherSmart	Total Gross Demand Reduction (kW)	1.2	2.2	3.4
	WeatherSmart	Net Adjusted Demand Reduction (kW)	1.1	2.1	3.2

P.3.4 2021-2022 North Carolina Residential Smart Thermostat Purchase and Weather Smart Program Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RTEE	Not available	300	1,394	22%	Not Available	Not Available
RTEE	Schedule 1	299	1,394	21%	15,263	2%
RTEE	Schedule 1P	438	1,394	31%	31,241	1%



P.4 North Carolina Residential Smart Home Program 2022

P.4.1 2022 North Carolina Residential Smart Home Program Monthly Indicator Tables

NC - Residential Smart Home Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	
O&M (\$)		Direct Rebate														
O&M (\$)		Direct Implementation														
O&M (\$)		Direct EM&V														
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$127	\$127	\$142	\$168	\$125	\$689	
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,038	\$3,037	\$3,399	\$4,030	\$3,000	\$16,505	
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,525	\$10,525	\$10,525	\$10,525	\$10,525	\$52,623	
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-\$7,487	-\$7,487	-\$7,126	-\$6,495	-\$7,524	-\$36,119	
		Annual % of Planned	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	11.5%	18.0%	25.7%	31.4%	31%	
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	1	0	1	
		Planned	33	25	25	25	25	25	25	25	25	25	25	25	308	
		Variance	-33	-25	-25	-25	-25	-25	-25	-25	-25	-25	-24	-25	-307	
		Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	383	0	383	
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	N/A	100%	
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	383	0	383	
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	85%	N/A	85%	
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	-58	0	-58	
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	326	0	326	
		Planned Net Savings (kWh/yr)	39,018	29,559	29,559	29,559	29,559	29,559	29,559	29,559	29,559	29,559	29,559	29,559	364,164	
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.09%	0.09%	0.09%	
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	383	N/A	383	
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	326	N/A	326	
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	85%	100%	85%	
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Planned Net Savings (kW)	9.6	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	89.3	
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.03%	0.03%	0.03%	
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.03	N/A	0.03	
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.03	N/A	0.03	
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	100%	-	
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	85%	85%	
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	4.4	54.5	
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	0.30%	0.30%	
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$564	\$689	\$689	
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1	\$2	\$2	
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$16,139	\$19,725	\$19,725	
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0%	1.5%	5.5%	11.1%	9.1%	9.1%	
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$25	\$25	\$25	



P.4.2 2022 North Carolina Residential Smart Home Program Measure Indicator Tables

NC - Residential Smart Home Program			2022
Measures			
	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Total Participants	0
Installed kWh/year	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Total Gross Energy Savings (kWh/yr)	0
	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Net Adjusted Savings (kWh/yr)	0
Installed Summer peak kW	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Total Gross Demand Reduction (kW)	0.0
	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Total Gross Demand Reduction (kW)	-
	Smart Thermostat w/ Voice Control and Temp/Humidity Sensor	Net Adjusted Demand Reduction (kW)	-



NC - Residential Smart Home Program			2022
Measures			
	Connected 9.5W ENERGY STAR LED	Total Participants	1
Installed kWh/year	Connected 9.5W ENERGY STAR LED	Total Gross Energy Savings (kWh/yr)	0
	Connected 9.5W ENERGY STAR LED	Net Adjusted Savings (kWh/yr)	0
Installed Summer peak kW	Connected 9.5W ENERGY STAR LED	Total Gross Demand Reduction (kW)	0.0
	Connected 9.5W ENERGY STAR LED	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Connected 9.5W ENERGY STAR LED	Total Gross Demand Reduction (kW)	0.0
	Connected 9.5W ENERGY STAR LED	Net Adjusted Demand Reduction (kW)	0.0
	Smart Home Energy Monitor (w/ solar option)	Total Participants	0
Installed kWh/year	Smart Home Energy Monitor (w/ solar option)	Total Gross Energy Savings (kWh/yr)	0
	Smart Home Energy Monitor (w/ solar option)	Net Adjusted Savings (kWh/yr)	0
Installed Summer peak kW	Smart Home Energy Monitor (w/ solar option)	Total Gross Demand Reduction (kW)	0.0
	Smart Home Energy Monitor (w/ solar option)	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Smart Home Energy Monitor (w/ solar option)	Total Gross Demand Reduction (kW)	-
	Smart Home Energy Monitor (w/ solar option)	Net Adjusted Demand Reduction (kW)	-
	Smart Home Hub with Entry/Motion Sensor	Total Participants	1
Installed kWh/year	Smart Home Hub with Entry/Motion Sensor	Total Gross Energy Savings (kWh/yr)	46
	Smart Home Hub with Entry/Motion Sensor	Net Adjusted Savings (kWh/yr)	39
Installed Summer peak kW	Smart Home Hub with Entry/Motion Sensor	Total Gross Demand Reduction (kW)	0.0
	Smart Home Hub with Entry/Motion Sensor	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Smart Home Hub with Entry/Motion Sensor	Total Gross Demand Reduction (kW)	0.0
	Smart Home Hub with Entry/Motion Sensor	Net Adjusted Demand Reduction (kW)	0.0
	Smart Plugs	Total Participants	1
Installed kWh/year	Smart Plugs	Total Gross Energy Savings (kWh/yr)	337
	Smart Plugs	Net Adjusted Savings (kWh/yr)	286
Installed Summer peak kW	Smart Plugs	Total Gross Demand Reduction (kW)	0.0
	Smart Plugs	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Smart Plugs	Total Gross Demand Reduction (kW)	0.2
	Smart Plugs	Net Adjusted Demand Reduction (kW)	0.2



P.4.3 2022 North Carolina Residential Smart Home Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RSMH	Not available	326	1,394	23%	Not Available	Not Available
RSMH	Schedule 1	326	1,394	23%	15,263	2%

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P.5 North Carolina Residential Water Savings Program 2022

P.5.1 2022 North Carolina Residential Water Savings Program Monthly Indicator Tables

NC - Residential Water Savings Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
O&M (\$)		Direct Rebate													
O&M (\$)		Direct Implementation													
O&M (\$)		Direct EM&V													
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$38	\$42	\$41	\$52	\$38	\$211
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$903	\$1,012	\$988	\$1,241	\$903	\$5,048
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,072	\$4,072	\$4,072	\$4,072	\$4,072	\$20,362
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-\$3,169	-\$3,060	-\$3,084	-\$2,831	-\$3,169	-\$15,314
		Annual % of Planned	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	9.4%	14.3%	20.4%	24.8%	25%
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned	5	5	5	5	5	5	5	5	5	5	5	5	60
		Variance	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-60
		Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned Net Savings (kWh/yr)	9,842	9,842	9,842	9,842	9,842	9,842	9,842	9,842	9,842	9,842	9,842	9,842	118,098
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	28.1
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0%	5.5%	6.4%	12.3%	10.1%	10.1%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



P.6 North Carolina Residential Appliance Recycling Program (DSM Phase VII) 2019-2022

P.6.1 2019–2022 North Carolina Residential Appliance Recycling Program (DSM Phase VII) Annual Indicator Tables

NC - Residential Appliance Recycling Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$0	\$881	\$542	\$1,057	\$2,479
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$17,270	\$11,552	\$25,314	\$54,136
Costs (\$)		Planned	\$0	\$116,132	\$111,062	\$115,406	\$342,599
Costs (\$)		Variance	\$0	-\$98,861	-\$99,510	-\$90,092	-\$288,463
		Annual % of Planned	N/A	15%	10%	22%	16%
Participants ¹		Total (Gross)	0	0	0	19	19
		Planned	0	570	570	570	1,710
		Variance	0	-570	-570	-551	-1,691
		Annual % of Planned (Gross)	N/A	0%	0%	3%	1%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	14,260	14,260
		Realization Rate Weighted by Measure	N/A	N/A	N/A	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	14,260	14,260
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	60%	60%
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	-5,704	-5,704
		Net Adjusted Savings (kWh/yr)	0	0	0	8,556	8,556
		Planned Net Savings (kWh/yr)	0	268,200	268,200	268,200	804,600
		Annual % Toward Planned Net Savings	N/A	0%	0%	3.19%	1.06%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	751	751
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	450	450
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	2.1	2.1
		Realization Rate Weighted by Measure	N/A	N/A	N/A	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	2.1	2.1
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	60%	60%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	-0.9	-0.9
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	1.3	1.3
		Planned Net Savings (kW)	0.0	30.6	30.6	30.6	91.8
		Annual % Toward Planned Net Reduction	N/A	0%	0%	4.18%	1.39%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	0.1	0.1
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	0.07	0.07
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
		Realization Rate Weighted by Measure	-	-	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	-	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	-	-	0.0
		Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0
		Planned Net Savings (kW)	0.0	0.0	30.6	30.6	61.2
		Annual % Toward Planned Net Reduction	-	-	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-
Measures							
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	\$130	\$130
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	\$1,162	\$1,162
		Cum. \$EM&V per \$Total	N/A	15.3%	24.7%	18.0%	18.0%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	\$20	\$20



P.6.2 2022 North Carolina Residential Appliance Recycling Program (DSM Phase VII) Monthly Indicator Tables

NC - Residential Appliance Recycling Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2019-2022	
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	Total	Total	Total	
O&M (\$)		Direct Rebate																		
O&M (\$)		Direct Implementation																		
O&M (\$)		Direct EM&V																		
O&M (\$)		Indirect Other (Administrative)	\$80	\$65	\$90	\$92	\$105	\$77	\$94	\$76	\$138	\$70	\$112	\$57	\$1,057				\$2,479	
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				\$0	\$0
Costs (\$)		Total	\$1,908	\$1,565	\$2,163	\$2,201	\$2,514	\$1,840	\$2,252	\$1,821	\$3,316	\$1,687	\$2,691	\$1,355	\$25,314				\$54,136	
Costs (\$)		Planned	\$9,617	\$9,617	\$9,617	\$9,617	\$9,617	\$9,617	\$9,617	\$9,617	\$9,617	\$9,617	\$9,617	\$9,617	\$115,406				\$342,599	
Costs (\$)		Variance	-\$7,709	-\$8,052	-\$7,454	-\$7,416	-\$7,103	-\$7,777	-\$7,365	-\$7,796	-\$6,301	-\$7,930	-\$8,262	-\$8,262	-\$90,092				-\$288,463	
		Annual % of Planned	1.7%	3.0%	4.9%	6.8%	9.0%	10.6%	12.5%	14.1%	17.0%	18.4%	20.8%	21.9%	22%				16%	
Participants ¹		Total (Gross)	0	0	0	7	0	7	0	0	0	5	0	0	19				19	
		Planned	53	47	47	47	47	47	47	47	47	47	47	47	570				1,710	
		Variance	-53	-47	-47	-40	-47	-40	-47	-47	-47	-47	-47	-47	-551				-1,691	
		Annual % of Planned (Gross)	0%	0%	0%	1%	1%	2%	2%	2%	2%	3%	3%	3%	3%				1%	
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	5,594	0	5,208	0	0	0	3,458	0	0	14,260				14,260	
		Realization Rate Weighted by Measure	N/A	N/A	N/A	100%	N/A	100%	N/A	N/A	N/A	100%	N/A	N/A	100%				100%	
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0				0	
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	5,594	0	5,208	0	0	0	3,458	0	0	14,260				14,260	
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	60%	N/A	60%	N/A	N/A	N/A	60%	N/A	N/A	60%				60%	
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	-2,238	0	-2,083	0	0	0	-1,383	0	0	-5,704				-5,704	
		Net Adjusted Savings (kWh/yr)	0	0	0	3,356	0	3,125	0	0	0	2,075	0	0	8,556				8,556	
		Planned Net Savings (kWh/yr)	24,938	22,115	22,115	22,115	22,115	22,115	22,115	22,115	22,115	22,115	22,115	22,115	268,200				804,600	
		Annual % Toward Planned Net Savings	0%	0%	0%	1.25%	1.25%	2.42%	2.42%	2.42%	2.42%	3.19%	3.19%	3.19%	3.19%				1.06%	
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	799	N/A	744	N/A	N/A	N/A	692	N/A	N/A	751				751	
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	479	N/A	446	N/A	N/A	N/A	415	N/A	N/A	450				450	
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0	2.1				2.1	
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				100%	
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0	2.1				2.1	
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	60%	100%	60%	100%	100%	100%	60%	100%	100%	60%				60%	
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	-0.3	0.0	-0.3	0.0	0.0	0.0	-0.2	0.0	0.0	-0.9				-0.9	
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0	1.3				1.3	
		Planned Net Savings (kW)	2.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	30.6				91.8	
		Annual % Toward Planned Net Reduction	0%	0%	0%	1.64%	1.64%	3.17%	3.17%	3.17%	3.17%	4.18%	4.18%	4.18%	4.18%				1.39%	
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	0.12	N/A	0.11	N/A	N/A	N/A	0.10	N/A	N/A	0.1				0.1	
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	0.07	N/A	0.07	N/A	N/A	N/A	0.06	N/A	N/A	0.07				0.07	
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0	
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-				N/A	
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0	
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-				N/A	
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0	
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0	
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-				91.8	
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-				0%	
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-				-	
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-				-	
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	\$250	\$265	\$138	\$145	\$150	\$160	\$122	\$128	\$130	\$130				\$130	
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				\$0	
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	\$2,089	\$2,215	\$1,195	\$1,253	\$1,300	\$1,385	\$1,082	\$1,135	\$1,162	\$1,162				\$1,162	
		Cum. \$EM&V per \$Total	23.2%	22.8%	22.0%	20.8%	19.8%	19.6%	18.5%	18.9%	18.2%	18.1%	18.5%	18.0%	18.0%				18.0%	
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20				\$20	



P.6.3 2020–2022 North Carolina Residential Appliance Recycling Program (DSM Phase VII) Measure Indicator Tables

NC - Residential Appliance Recycling Program			2019	2020	2021	2022	2019-2022
Measures							
	Freezer	Total Participants	0	0	0	4	4
Installed kWh/year	Freezer	Total Gross Energy Savings (kWh/yr)	0	0	0	3,444	3,444
	Freezer	Net Adjusted Savings (kWh/yr)	0	0	0	2,067	2,067
Installed Summer peak kW	Freezer	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.5	0.5
	Freezer	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.3	0.3
Installed Winter peak kW	Freezer	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
	Freezer	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0
	Refrigerator	Total Participants	0	0	0	15	15
Installed kWh/year	Refrigerator	Total Gross Energy Savings (kWh/yr)	0	0	0	10,816	10,816
	Refrigerator	Net Adjusted Savings (kWh/yr)	0	0	0	6,489	6,489
Installed Summer peak kW	Refrigerator	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	1.6	1.6
	Refrigerator	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	1.0	1.0
Installed Winter peak kW	Refrigerator	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
	Refrigerator	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0

P.6.4 2020–2022 North Carolina Residential Appliance Recycling Program (DSM Phase VII) Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	Average Net Impact Per Part	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RAR2	Not available	450	471	96%	Not Available	Not Available
RAR2	Schedule 1	450	471	96%	15,263	3%



P.7 North Carolina Residential Home Energy Assessment Program 2019-2022

P.7.1 2019–2022 North Carolina Residential Home Energy Assessment Annual Indicator Tables

NC - Residential Home Energy Assessment Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$0	\$5,032	\$5,671	\$4,541	\$15,245
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$96,955	\$120,947	\$108,763	\$326,666
Costs (\$)		Planned	\$0	\$270,379	\$295,885	\$314,257	\$880,520
Costs (\$)		Variance	\$0	-\$173,423	-\$174,938	-\$205,493	-\$553,855
		Annual % of Planned	N/A	36%	41%	35%	37%
Participants ¹		Total (Gross)	0	17	32	18	67
		Planned	0	1,821	2,101	2,043	5,965
		Variance	0	-1,804	-2,069	-2,025	-5,898
		Annual % of Planned (Gross)	N/A	1%	2%	1%	1%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	19,413	70,833	28,587	118,833
		Realization Rate Weighted by Measure	N/A	22%	23%	40%	27%
		Realization Rate Adjustment (kWh/yr)	0	-15,142	-54,541	-17,152	-86,836
		Realization Rate Adjusted Savings (kWh/yr)	0	4,271	16,292	11,435	31,997
		Net-To-Gross Rate Weighted by Measure	N/A	100%	100%	100%	100%
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	4,271	16,292	11,435	31,997
		Planned Net Savings (kWh/yr)	0	595,385	716,072	739,401	2,050,858
		Annual % Toward Planned Net Savings	N/A	0.72%	2.28%	1.55%	1.56%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	1,142	2,214	1,588	1,774
		Avg. Net Savings Per Participant (kWh/yr)	N/A	251	509	635	478
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	1.4	4.4	2.0	7.9
		Realization Rate Weighted by Measure	N/A	22%	23%	40%	27%
		Realization Rate Adjustment (kW)	0.0	-1.1	-3.4	-1.2	-5.7
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.3	1.0	0.8	2.1
		Net-To-Gross Rate Weighted by Measure	N/A	100%	100%	100%	100%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.3	1.0	0.8	2.1
		Planned Net Savings (kW)	0.0	278.8	326.9	296.1	901.8
		Annual % Toward Planned Net Reduction	N/A	0.11%	0.31%	0.27%	0.24%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.08	0.1	0.1	0.1
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.02	0.03	0.04	0.03
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	9.6	4.3	13.9
		Realization Rate Weighted by Measure	-	-	23%	40%	28%
		Realization Rate Adjustment (kW)	-	-	-7.4	-2.6	-10.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	2.2	1.7	3.9
		Net-To-Gross Rate Weighted by Measure	-	-	100%	100%	100%
		Net-To-Gross Adjustment (kW)	-	-	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	-	2.2	1.7	3.9
		Planned Net Savings (kW)	0.0	0.0	923.0	774.4	1,697.4
		Annual % Toward Planned Net Reduction	-	-	0.24%	0.22%	0.23%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	0.3	0.2	0.3
		Avg. Net Demand Reduction Per Participant (kW)	-	-	0.07	0.09	0.08
Measures							
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$296	\$218	\$228	\$228
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0	\$0	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	\$3,488	\$1,819	\$1,939	\$1,939
		Cum. \$EM&V per \$Total	N/A	9.2%	8.8%	9.2%	9.2%
		Cum. \$Rebate per Participant (Gross)	N/A	\$262	\$460	\$439	\$439



P.7.2 2022 North Carolina Residential Home Energy Assessment Monthly Indicator Tables

Category	Measure	Indicator	2022												2022 Total	2019-2022 Total			
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC					
O&M (\$)	Direct Rebate																		
	Direct Implementation																		
	Direct EM&V																		
	Indirect Other (Administrative)																		
Capital (\$)																			
Costs (\$)	Total	\$7,865	\$9,311	\$6,072	\$8,456	\$9,353	\$3,907	\$3,387	\$3,506	\$4,566	\$5,611	\$3,949	\$5,611	\$3,949	\$5,611	\$4,541	\$15,245	\$0	
	Planned	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188	\$26,188
	Variance	-\$18,323	-\$16,877	-\$19,116	-\$17,732	-\$16,849	-\$16,927	-\$18,861	-\$17,841	-\$15,266	-\$17,841	-\$12,761	-\$17,820	-\$18,110	-\$17,820	-\$18,110	-\$206,493	-\$553,855	\$0
Participants ¹	Annual % of Planned	2.5%	5.5%	8.0%	10.7%	13.7%	16.6%	19.0%	22.4%	25.1%	29.4%	32.0%	34.6%	32.0%	34.6%	35%	37%	37%	
	Total (Gross)	1	1	0	0	4	1	1	0	1	0	8	1	1	1	18	67	67	
Installed kWh/year	Planned	173	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	
	Variance	-172	-169	-170	-170	-166	-170	-169	-170	-169	-170	-162	-169	-169	-169	-169	-2,025	-5,898	
	Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	
Total	Total Gross Energy Savings (kWh/yr)	1,615	1,368	0	0	2,684	1,471	0	2,730	0	14,884	1,692	2,182	2,182	2,182	26,587	118,833	0	
	Realization Rate Weighted by Measure	40%	40%	N/A	N/A	40%	40%	N/A	40%	40%	N/A	40%	40%	40%	40%	40%	40%	27%	
	Realization Rate Adjustment (kWh/yr)	-969	-821	0	0	-1,598	-883	0	-1,638	0	-8,918	-1,015	-1,309	-1,309	-1,309	-17,162	-86,836	0	
	Realization Rate Adjusted Savings (kWh/yr)	646	547	0	0	1,086	589	0	1,092	0	5,946	677	873	873	873	11,435	31,997	0	
	Net-To-Gross Rate Weighted by Measure	100%	100%	N/A	N/A	100%	100%	N/A	100%	100%	N/A	100%	100%	100%	100%	100%	100%	100%	
	Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net Adjusted Savings (kWh/yr)	646	547	0	0	1,086	589	0	1,092	0	5,946	677	873	873	873	11,435	31,997	0	
	Planned Net Savings (kWh/yr)	62,612	61,526	61,526	61,526	61,526	61,526	61,526	61,526	61,526	61,526	61,526	61,526	61,526	61,526	61,526	739,401	2,050,858	
	Annual % Toward Planned Net Savings	0.09%	0.16%	0.16%	0.31%	0.39%	0.39%	0.53%	1.34%	1.43%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.56%	1.56%	
	Avg. Gross Savings Per Participant (kWh/yr)	1,615	1,368	N/A	N/A	666	1,471	N/A	2,730	N/A	1,858	1,692	2,182	1,588	1,774	1,774	1,588	1,774	
Avg. Net Savings Per Participant (kWh/yr)	646	547	N/A	N/A	266	589	N/A	1,092	N/A	743	677	873	635	478	478	635	478		
Installed Summer peak kW	Total	0.1	0.1	0.0	0.0	0.5	0.1	0.0	0.2	0.0	0.8	0.1	0.1	0.1	0.1	2.0	7.9	0	
	Realization Rate Weighted by Measure	40%	40%	100%	100%	40%	40%	100%	40%	40%	100%	40%	40%	40%	40%	40%	40%	27%	
	Realization Rate Adjustment (kW)	-0.1	-0.1	0.0	0.0	-0.3	0.0	-0.1	0.0	-0.1	0.0	-0.5	-0.1	-0.1	-0.1	-1.2	-5.7	0	
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.8	2.1	0	
	Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.8	2.1	0	
	Planned Net Savings (kW)	25.1	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	
	Annual % Toward Planned Net Reduction	0.01%	0.03%	0.03%	0.10%	0.10%	0.11%	0.13%	0.13%	0.24%	0.24%	0.25%	0.27%	0.27%	0.27%	0.24%	0.24%	0.24%	
	Avg. Gross Demand Reduction Per Participant (kW)	0.11	0.10	N/A	N/A	0.13	0.06	N/A	0.19	N/A	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	
Avg. Net Demand Reduction Per Participant (kW)	0.04	0.04	N/A	N/A	0.05	0.02	N/A	0.08	N/A	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04		
Installed Winter peak kW	Total	0.3	0.2	0.0	0.0	0.9	0.1	0.0	0.4	0.0	1.9	0.2	0.2	0.2	4.3	13.9	0		
	Realization Rate Weighted by Measure	40%	40%	100%	100%	40%	40%	100%	40%	40%	100%	40%	40%	40%	40%	40%	28%		
	Realization Rate Adjustment (kW)	-0.2	-0.1	0.0	0.0	-0.5	-0.1	0.0	-0.2	0.0	-1.1	-0.1	-0.1	-0.1	-0.1	-2.6	-10.0	0	
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.1	0.1	0.0	0.0	0.4	0.1	0.0	0.2	0.0	0.7	0.1	0.1	0.1	0.1	1.7	3.9	0	
	Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Net Adjusted Demand Reduction (kW)	0.1	0.1	0.0	0.0	0.4	0.1	0.0	0.2	0.0	0.7	0.1	0.1	0.1	0.1	1.7	3.9	0	
	Planned Net Savings (kW)	65.6	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	
	Annual % Toward Planned Net Reduction	0.01%	0.03%	0.03%	0.03%	0.08%	0.08%	0.10%	0.10%	0.10%	0.20%	0.21%	0.22%	0.22%	0.22%	0.23%	0.23%	0.23%	
	Avg. Gross Demand Reduction Per Participant (kW)	0.3	0.2	N/A	N/A	0.2	0.1	N/A	0.4	N/A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
Avg. Net Demand Reduction Per Participant (kW)	0.1	0.09	N/A	N/A	0.09	0.05	N/A	0.2	N/A	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08		
Program Performance	Cum. \$Admin. per Participant (Gross)	\$221	\$224	\$231	\$237	\$272	\$230	\$236	\$239	\$246	\$224	\$226	\$228	\$228	\$228	\$228	\$228	\$228	
	Cum. \$Admin. per kWh/yr (Gross)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Cum. \$EM&V per kW (Gross)	\$1,840	\$1,873	\$1,928	\$1,986	\$1,987	\$1,987	\$2,038	\$1,899	\$2,038	\$1,899	\$1,919	\$1,939	\$1,939	\$1,939	\$1,939	\$1,939	\$1,939	
	Cum. \$Rebate per Participant (Gross)	\$461	\$458	\$458	\$458	\$438	\$433	\$437	\$437	\$437	\$438	\$438	\$439	\$439	\$439	\$439	\$439	\$439	



P.7.3 2020–2022 North Carolina Residential Home Energy Assessment Measure Indicator Tables

NC - Residential Home Energy Assessment Program			2020	2021	2022	2019-2022
Measures						
	Water Distribution	Total Participants	8	6	0	14
Installed kWh/year	Water Distribution	Total Gross Energy Savings (kWh/yr)	445	1,589	0	2,035
	Water Distribution	Net Adjusted Savings (kWh/yr)	98	366	0	464
Installed Summer peak kW	Water Distribution	Total Gross Demand Reduction (kW)	0.0	0.1	0.0	0.1
	Water Distribution	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Water Distribution	Total Gross Demand Reduction (kW)	-	0.1	0.0	0.1
	Water Distribution	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Water Heater Replacement	Total Participants	0	0	0	0
Installed kWh/year	Water Heater Replacement	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Water Heater Replacement	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Water Heater Replacement	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Water Heater Replacement	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Water Heater Replacement	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Water Heater Replacement	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Water Heater Turndown 10 Degrees	Total Participants	0	0	0	0
Installed kWh/year	Water Heater Turndown 10 Degrees	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Water Heater Turndown 10 Degrees	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Water Heater Turndown 10 Degrees	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Water Heater Turndown 10 Degrees	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Water Heater Turndown 10 Degrees	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Water Heater Turndown 10 Degrees	Net Adjusted Demand Reduction (kW)	-	-	-	0.0



NC - Residential Home Energy Assessment Program			2020	2021	2022	2019-2022
Measures						
	Heat Pump Tune Up	Total Participants	1	5	3	9
Installed kWh/year	Heat Pump Tune Up	Total Gross Energy Savings (kWh/yr)	356	1,483	955	2,794
	Heat Pump Tune Up	Net Adjusted Savings (kWh/yr)	78	341	382	801
Installed Summer peak kW	Heat Pump Tune Up	Total Gross Demand Reduction (kW)	0.3	0.7	0.4	1.4
	Heat Pump Tune Up	Net Adjusted Demand Reduction (kW)	0.1	0.2	0.2	0.4
Installed Winter peak kW	Heat Pump Tune Up	Total Gross Demand Reduction (kW)	-	0.9	0.6	1.6
	Heat Pump Tune Up	Net Adjusted Demand Reduction (kW)	-	0.2	0.3	0.5
	Heat Pump Upgrade	Total Participants	0	1	0	1
Installed kWh/year	Heat Pump Upgrade	Total Gross Energy Savings (kWh/yr)	0	930	0	930
	Heat Pump Upgrade	Net Adjusted Savings (kWh/yr)	0	214	0	214
Installed Summer peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	0.0	0.3	0.0	0.3
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	0.0	0.1	0.0	0.1
Installed Winter peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	-	0.5	0.0	0.5
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	-	0.1	0.0	0.1
	Hot Water Pipe Insulation	Total Participants	8	7	0	15
Installed kWh/year	Hot Water Pipe Insulation	Total Gross Energy Savings (kWh/yr)	609	712	0	1,321
	Hot Water Pipe Insulation	Net Adjusted Savings (kWh/yr)	134	164	0	298
Installed Summer peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	0.1	0.1	0.0	0.2
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	-	0.1	0.0	0.1
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Lighting	Total Participants	11	26	15	52
Installed kWh/year	Lighting	Total Gross Energy Savings (kWh/yr)	17,387	66,118	27,632	111,138
	Lighting	Net Adjusted Savings (kWh/yr)	3,825	15,207	11,053	30,085
Installed Summer peak kW	Lighting	Total Gross Demand Reduction (kW)	0.7	3.3	1.6	5.6
	Lighting	Net Adjusted Demand Reduction (kW)	0.2	0.8	0.6	1.6
Installed Winter peak kW	Lighting	Total Gross Demand Reduction (kW)	-	8.1	3.6	11.7
	Lighting	Net Adjusted Demand Reduction (kW)	-	1.9	1.4	3.3



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NC - Residential Home Energy Assessment Program			2020	2021	2022	2019-2022
Measures						
	Cool Roof	Total Participants	0	0	0	0
Installed kWh/year	Cool Roof	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Cool Roof	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Cool Roof	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Cool Roof	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Cool Roof	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Cool Roof	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Duct Insulation	Total Participants	0	0	0	0
Installed kWh/year	Duct Insulation	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Duct Insulation	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Duct Insulation	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Duct Insulation	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Duct Insulation	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Duct Insulation	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Duct Sealing	Total Participants	1	0	0	1
Installed kWh/year	Duct Sealing	Total Gross Energy Savings (kWh/yr)	616	0	0	616
	Duct Sealing	Net Adjusted Savings (kWh/yr)	136	0	0	136
Installed Summer peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	0.3	0.0	0.0	0.3
	Duct Sealing	Net Adjusted Demand Reduction (kW)	0.1	0.0	0.0	0.1
Installed Winter peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Duct Sealing	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	ECM Fan Motor	Total Participants	0	0	0	0
Installed kWh/year	ECM Fan Motor	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	ECM Fan Motor	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	ECM Fan Motor	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	ECM Fan Motor	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	ECM Fan Motor	Total Gross Demand Reduction (kW)	-	-	-	0.0
	ECM Fan Motor	Net Adjusted Demand Reduction (kW)	-	-	-	0.0

P.7.4 2020–2022 North Carolina Residential Home Energy Assessment Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RTHO	Not available	478	469	102%	Not Available	Not Available
RTHO	Schedule 26	210	469	45%	129,980	0%
RTHO	Schedule 1	490	469	104%	15,263	3%



P.8 North Carolina Residential Home Retrofit Program 2020-2022

P.8.1 2020-2022 North Carolina Residential Home Retrofit Program Annual Indicator Tables

NC - Residential Home Retrofit Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$0	\$1,676	\$2,021	\$3,696
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$35,738	\$48,397	\$84,135
Costs (\$)		Planned	\$0	\$81,417	\$119,576	\$200,993
Costs (\$)		Variance	\$0	-\$45,678	-\$71,179	-\$116,858
		Annual % of Planned	N/A	44%	40%	42%
Participants ¹		Total (Gross)	0	0	0	0
		Planned	0	54	120	174
		Variance	0	-54	-120	-174
		Annual % of Planned (Gross)	N/A	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0
		Planned Net Savings (kWh/yr)	0	105,039	233,421	338,460
		Annual % Toward Planned Net Savings	N/A	0%	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	30.2	67.0	97.2
		Annual % Toward Planned Net Reduction	N/A	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	0.0
		Realization Rate Weighted by Measure	-	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	-	0.0
		Net Adjusted Demand Reduction (kW)	-	-	-	0.0
		Planned Net Savings (kW)	0.0	11.2	24.8	35.9
		Annual % Toward Planned Net Reduction	-	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	N/A	6.9%	14.2%	14.2%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A



P.9 North Carolina Residential Virtual Energy Audit Program 2022

P.9.1 2022 North Carolina Residential Virtual Energy Audit Program Monthly Indicator Tables

NC - Residential Virtual Energy Audit Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	
O&M (\$)		Direct Rebate														
O&M (\$)		Direct Implementation														
O&M (\$)		Direct EM&V														
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$249	\$104	\$110	\$111	\$73	\$647	
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,955	\$2,492	\$2,642	\$2,657	\$1,747	\$15,492	
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$21,560	\$21,560	\$21,560	\$21,560	\$21,560	\$107,801	
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-\$15,605	-\$19,068	-\$18,918	-\$18,903	-\$19,814	-\$92,308	
		Annual % of Planned	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	7.8%	10.3%	12.8%	14.4%	14%	
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	25	6	4	1	3	39	
		Planned	300	300	300	300	300	300	300	300	300	300	300	300	3,600	
		Variance	-300	-300	-300	-300	-300	-300	-300	-275	-294	-296	-299	-297	-3,561	
		Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	27,460	4,887	4,733	1,154	2,516	40,749	
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	100%	100%	100%	100%	100%	
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	27,460	4,887	4,733	1,154	2,516	40,749	
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60%	60%	60%	60%	60%	60%	
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	-10,984	-1,955	-1,893	-462	-1,006	-16,300	
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	16,476	2,932	2,840	692	1,509	24,450	
		Planned Net Savings (kWh/yr)	89,280	89,280	89,280	89,280	89,280	89,280	89,280	89,280	89,280	89,280	89,280	89,280	1,071,360	
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	1.54%	1.81%	2.08%	2.14%	2.28%	2.28%	
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,098	815	1,183	1,154	839	1,045	
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	659	489	710	692	503	627	
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.5	0.4	0.1	0.2	3.5	
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.5	0.4	0.1	0.2	3.5	
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	60%	60%	60%	60%	60%	60%	
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	-0.2	-0.2	0.0	-0.1	-1.4	
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.3	0.2	0.1	0.1	2.1	
		Planned Net Savings (kW)	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	367.2	
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0.36%	0.45%	0.51%	0.53%	0.57%	0.57%	
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.09	0.08	0.10	0.12	0.08	0.09	
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.05	0.05	0.06	0.07	0.05	0.05	
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	3.5	0.7	0.7	0.2	0.5	5.6	
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	100%	100%	100%	100%	100%	100%	
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	3.5	0.7	0.7	0.2	0.5	5.6	
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	60%	60%	60%	60%	60%	60%	
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-1.4	-0.3	-0.3	-0.1	-0.2	-2.2	
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	2.1	0.4	0.4	0.1	0.3	3.4	
		Planned Net Savings (kW)	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	237.6	
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	0.88%	1.06%	1.24%	1.30%	1.41%	1.41%	
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	0.1	0.1	0.2	0.2	0.2	0.1	
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	0.08	0.07	0.1	0.1	0.09	0.09	
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$10	\$11	\$13	\$16	\$17	\$17	
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$0.01	\$0.01	\$0.01	\$0.02	\$0.02	\$0.02	
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$111	\$129	\$148	\$177	\$185	\$185	
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0%	2.7%	6.0%	12.3%	11.0%	11.0%	
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$127	\$126	\$127	\$129	\$127	\$127	



P.9.2 2022 North Carolina Residential Virtual Energy Audit Program Measure Indicator Tables

NC - Residential Virtual Energy Audit Program			2022
Measures			
	Window Weatherstripping	Total Participants	7
Installed kWh/year	Window Weatherstripping	Total Gross Energy Savings (kWh/yr)	32
	Window Weatherstripping	Net Adjusted Savings (kWh/yr)	19
Installed Summer peak kW	Window Weatherstripping	Total Gross Demand Reduction (kW)	0.0
	Window Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Window Weatherstripping	Total Gross Demand Reduction (kW)	0.0
	Window Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0

NC - Residential Virtual Energy Audit Program			2022
Measures			
	Lighting	Total Participants	37
Installed kWh/year	Lighting	Total Gross Energy Savings (kWh/yr)	12,960
	Lighting	Net Adjusted Savings (kWh/yr)	7,776
Installed Summer peak kW	Lighting	Total Gross Demand Reduction (kW)	1.2
	Lighting	Net Adjusted Demand Reduction (kW)	0.7
Installed Winter peak kW	Lighting	Total Gross Demand Reduction (kW)	2.5
	Lighting	Net Adjusted Demand Reduction (kW)	1.5
	Outlet/Switch Gaskets	Total Participants	7
Installed kWh/year	Outlet/Switch Gaskets	Total Gross Energy Savings (kWh/yr)	24
	Outlet/Switch Gaskets	Net Adjusted Savings (kWh/yr)	15
Installed Summer peak kW	Outlet/Switch Gaskets	Total Gross Demand Reduction (kW)	0.0
	Outlet/Switch Gaskets	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Outlet/Switch Gaskets	Total Gross Demand Reduction (kW)	0.0
	Outlet/Switch Gaskets	Net Adjusted Demand Reduction (kW)	0.0
	Smart Strips	Total Participants	36
Installed kWh/year	Smart Strips	Total Gross Energy Savings (kWh/yr)	4,041
	Smart Strips	Net Adjusted Savings (kWh/yr)	2,425
Installed Summer peak kW	Smart Strips	Total Gross Demand Reduction (kW)	0.4
	Smart Strips	Net Adjusted Demand Reduction (kW)	0.2
Installed Winter peak kW	Smart Strips	Total Gross Demand Reduction (kW)	0.4
	Smart Strips	Net Adjusted Demand Reduction (kW)	0.2
	Water Distribution	Total Participants	37
Installed kWh/year	Water Distribution	Total Gross Energy Savings (kWh/yr)	16,320
	Water Distribution	Net Adjusted Savings (kWh/yr)	9,792
Installed Summer peak kW	Water Distribution	Total Gross Demand Reduction (kW)	1.0
	Water Distribution	Net Adjusted Demand Reduction (kW)	0.6
Installed Winter peak kW	Water Distribution	Total Gross Demand Reduction (kW)	1.0
	Water Distribution	Net Adjusted Demand Reduction (kW)	0.6



NC - Residential Virtual Energy Audit Program			2022
Measures			
	Caulking per Tube	Total Participants	7
Installed kWh/year	Caulking per Tube	Total Gross Energy Savings (kWh/yr)	63
	Caulking per Tube	Net Adjusted Savings (kWh/yr)	38
Installed Summer peak kW	Caulking per Tube	Total Gross Demand Reduction (kW)	0.0
	Caulking per Tube	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Caulking per Tube	Total Gross Demand Reduction (kW)	0.1
	Caulking per Tube	Net Adjusted Demand Reduction (kW)	0.1
	Door Sweep	Total Participants	7
Installed kWh/year	Door Sweep	Total Gross Energy Savings (kWh/yr)	472
	Door Sweep	Net Adjusted Savings (kWh/yr)	283
Installed Summer peak kW	Door Sweep	Total Gross Demand Reduction (kW)	0.1
	Door Sweep	Net Adjusted Demand Reduction (kW)	0.1
Installed Winter peak kW	Door Sweep	Total Gross Demand Reduction (kW)	0.7
	Door Sweep	Net Adjusted Demand Reduction (kW)	0.4
	Door Weatherstripping	Total Participants	7
Installed kWh/year	Door Weatherstripping	Total Gross Energy Savings (kWh/yr)	32
	Door Weatherstripping	Net Adjusted Savings (kWh/yr)	19
Installed Summer peak kW	Door Weatherstripping	Total Gross Demand Reduction (kW)	0.0
	Door Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Door Weatherstripping	Total Gross Demand Reduction (kW)	0.0
	Door Weatherstripping	Net Adjusted Demand Reduction (kW)	0.0
	Hot Water Pipe Insulation	Total Participants	37
Installed kWh/year	Hot Water Pipe Insulation	Total Gross Energy Savings (kWh/yr)	6,805
	Hot Water Pipe Insulation	Net Adjusted Savings (kWh/yr)	4,083
Installed Summer peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	0.8
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.5
Installed Winter peak kW	Hot Water Pipe Insulation	Total Gross Demand Reduction (kW)	0.8
	Hot Water Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.5

P.9.3 2022 North Carolina Residential Virtual Energy Audit Program Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	Average Net Impact Per Part	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
RVAU	Not available	627	469	134%	Not Available	Not Available
RVAU	Schedule 1	628	469	134%	15,263	4%
RVAU	Schedule 1P	578	469	123%	31,241	2%



P.10 North Carolina Residential Income and Age Qualifying Energy Efficiency Program 2022

P.10.1 2022 North Carolina Residential Income and Age Qualifying Energy Efficiency Program (Phase IX) Monthly Indicator Tables

NC - Residential Income and Age Qualifying Energy Efficiency Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total			
O&M (\$)		Direct Rebate																
O&M (\$)		Direct Implementation																
O&M (\$)		Direct EM&V																
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$577	\$1,384	\$2,030	\$450	\$118	\$233	\$912	\$200	\$5,904			
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$13,825	\$33,153	\$48,609	\$10,779	\$2,830	\$5,589	\$21,833	\$4,787	\$141,404			
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$38,667	\$38,667	\$38,667	\$38,667	\$38,667	\$38,667	\$38,667	\$38,667	\$309,337			
Costs (\$)		Variance	\$0	\$0	\$0	\$0	-\$24,842	-\$5,514	\$9,942	-\$27,888	-\$35,837	-\$33,078	-\$16,834	-\$33,880	-\$167,933			
		Annual % of Planned	0.0%	0.0%	0.0%	0.0%	4.5%	15.2%	30.9%	34.4%	35.3%	37.1%	44.2%	45.7%	46%			
Participants ¹		Total (Gross)	0	0	0	0	4	6	9	1	0	1	4	1	26			
		Planned	60	51	51	51	51	51	51	51	51	51	51	51	621			
		Variance	-60	-51	-51	-51	-47	-45	-42	-50	-51	-50	-47	-50	-595			
		Annual % of Planned (Gross)	0%	0%	0%	0%	1%	2%	3%	3%	3%	3%	4%	4%	4%			
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	160	7,506	28,360	4,305	0	518	5,852	556	47,257			
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	100%	100%	100%	100%	N/A	100%	100%	100%	100%			
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	160	7,506	28,360	4,305	0	518	5,852	556	47,257			
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	80%	80%	80%	80%	N/A	80%	80%	80%	80%			
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	-32	-1,501	-5,672	-861	0	-104	-1,170	-111	-9,451			
		Net Adjusted Savings (kWh/yr)	0	0	0	0	128	6,005	22,688	3,444	0	415	4,682	444	37,806			
		Planned Net Savings (kWh/yr)	3,168	2,693	2,693	2,693	2,693	2,693	2,693	2,693	2,693	2,693	2,693	2,693	32,789			
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	0.39%	18.7%	87.9%	98.4%	98.4%	99.7%	113.9%	115.3%	115.3%			
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	40	1,251	3,151	4,305	N/A	518	1,463	556	1,818			
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	32	1,001	2,521	3,444	N/A	415	1,170	444	1,454			
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	3.1	9.8	1.1	0.0	0.1	1.5	0.1	15.6			
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	3.1	9.8	1.1	0.0	0.1	1.5	0.1	15.6			
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	80%	80%	80%	80%	100%	80%	80%	80%	80%			
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	-0.6	-2.0	-0.2	0.0	0.0	-0.3	0.0	-3.1			
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	2.5	7.8	0.9	0.0	0.0	1.2	0.0	12.5			
		Planned Net Savings (kW)	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	8.4			
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0.24%	29.3%	122.2%	132.9%	132.9%	133.4%	147.4%	147.9%	147.9%			
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	0.01	0.51	1.1	1.1	N/A	0.05	0.37	0.06	0.6			
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	0.01	0.4	0.9	0.9	N/A	0.04	0.3	0.05	0.5			
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	0.0	3.8	13.0	6.1	0.0	0.1	3.4	0.1	26.5			
		Realization Rate Weighted by Measure	-	-	-	-	100%	100%	100%	100%	100%	100%	100%	100%	100%			
		Realization Rate Adjustment (kW)	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	0.0	3.8	13.0	6.1	0.0	0.1	3.4	0.1	26.5			
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	80%	80%	80%	80%	100%	80%	80%	80%	80%			
		Net-To-Gross Adjustment (kW)	-	-	-	-	0.0	-0.8	-2.6	-1.2	0.0	0.0	-0.7	0.0	-5.3			
		Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0	3.1	10.4	4.9	0.0	0.1	2.7	0.1	21.2			
		Planned Net Savings (kW)	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	18.7			
		Annual % Toward Planned Net Reduction	-	-	-	-	0.03%	16.4%	71.8%	97.7%	97.7%	98.3%	112.7%	113.1%	113.1%			
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	0.00	0.6	1.4	6.1	N/A	0.1	0.8	0.10	1.0			
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	0.00	0.5	1.2	4.9	N/A	0.1	0.7	0.08	0.8			
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	\$144	\$196	\$210	\$222	\$228	\$228	\$228	\$227	\$227			
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	\$4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	\$22,375	\$634	\$310	\$317	\$325	\$341	\$367	\$379	\$379			
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	0.0%	0.0%	0.0%	1.5%	2.1%	2.6%	3.4%	3.3%	3.3%			
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	\$770	\$2,867	\$3,525	\$3,639	\$3,639	\$3,569	\$3,590	\$3,536	\$3,536			



P.10.2 2022 North Carolina Residential Income and Age Qualifying Energy Efficiency (Phase IX) Measure Indicator Tables

NC - Residential Income and Age Qualifying Energy Efficiency Program			2022
Measures			
	Safety Tier I	Total Participants	20
Installed kWh/year	Safety Tier I	Total Gross Energy Savings (kWh/yr)	0
	Safety Tier I	Net Adjusted Savings (kWh/yr)	0
Installed Summer peak kW	Safety Tier I	Total Gross Demand Reduction (kW)	0.0
	Safety Tier I	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Safety Tier I	Total Gross Demand Reduction (kW)	-
	Safety Tier I	Net Adjusted Demand Reduction (kW)	-
	Safety Tier II	Total Participants	2
Installed kWh/year	Safety Tier II	Total Gross Energy Savings (kWh/yr)	0
	Safety Tier II	Net Adjusted Savings (kWh/yr)	0
Installed Summer peak kW	Safety Tier II	Total Gross Demand Reduction (kW)	0.0
	Safety Tier II	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Safety Tier II	Total Gross Demand Reduction (kW)	-
	Safety Tier II	Net Adjusted Demand Reduction (kW)	-
	Showerhead	Total Participants	17
Installed kWh/year	Showerhead	Total Gross Energy Savings (kWh/yr)	3,179
	Showerhead	Net Adjusted Savings (kWh/yr)	2,543
Installed Summer peak kW	Showerhead	Total Gross Demand Reduction (kW)	0.3
	Showerhead	Net Adjusted Demand Reduction (kW)	0.2
Installed Winter peak kW	Showerhead	Total Gross Demand Reduction (kW)	0.3
	Showerhead	Net Adjusted Demand Reduction (kW)	0.2
	Water Heater Tank Wrap	Total Participants	13
Installed kWh/year	Water Heater Tank Wrap	Total Gross Energy Savings (kWh/yr)	3,457
	Water Heater Tank Wrap	Net Adjusted Savings (kWh/yr)	2,766
Installed Summer peak kW	Water Heater Tank Wrap	Total Gross Demand Reduction (kW)	0.4
	Water Heater Tank Wrap	Net Adjusted Demand Reduction (kW)	0.3
Installed Winter peak kW	Water Heater Tank Wrap	Total Gross Demand Reduction (kW)	0.4
	Water Heater Tank Wrap	Net Adjusted Demand Reduction (kW)	0.3



NC - Residential Income and Age Qualifying Energy Efficiency Program			2022
Measures			
	Heat Pump Tune Up	Total Participants	0
Installed kWh/year	Heat Pump Tune Up	Total Gross Energy Savings (kWh/yr)	0
	Heat Pump Tune Up	Net Adjusted Savings (kWh/yr)	0
Installed Summer peak kW	Heat Pump Tune Up	Total Gross Demand Reduction (kW)	0.0
	Heat Pump Tune Up	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Heat Pump Tune Up	Total Gross Demand Reduction (kW)	-
	Heat Pump Tune Up	Net Adjusted Demand Reduction (kW)	-
	Kitchen Aerator	Total Participants	16
Installed kWh/year	Kitchen Aerator	Total Gross Energy Savings (kWh/yr)	420
	Kitchen Aerator	Net Adjusted Savings (kWh/yr)	336
Installed Summer peak kW	Kitchen Aerator	Total Gross Demand Reduction (kW)	0.0
	Kitchen Aerator	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Kitchen Aerator	Total Gross Demand Reduction (kW)	0.0
	Kitchen Aerator	Net Adjusted Demand Reduction (kW)	0.0
	Pipe Insulation	Total Participants	17
Installed kWh/year	Pipe Insulation	Total Gross Energy Savings (kWh/yr)	2,254
	Pipe Insulation	Net Adjusted Savings (kWh/yr)	1,803
Installed Summer peak kW	Pipe Insulation	Total Gross Demand Reduction (kW)	0.3
	Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.2
Installed Winter peak kW	Pipe Insulation	Total Gross Demand Reduction (kW)	0.3
	Pipe Insulation	Net Adjusted Demand Reduction (kW)	0.2
	Refrigerator Replacement	Total Participants	7
Installed kWh/year	Refrigerator Replacement	Total Gross Energy Savings (kWh/yr)	283
	Refrigerator Replacement	Net Adjusted Savings (kWh/yr)	226
Installed Summer peak kW	Refrigerator Replacement	Total Gross Demand Reduction (kW)	0.0
	Refrigerator Replacement	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Refrigerator Replacement	Total Gross Demand Reduction (kW)	0.0
	Refrigerator Replacement	Net Adjusted Demand Reduction (kW)	0.0



NC - Residential Income and Age Qualifying Energy Efficiency Program			2022
Measures			
	Attic Insulation	Total Participants	14
Installed kWh/year	Attic Insulation	Total Gross Energy Savings (kWh/yr)	16,022
	Attic Insulation	Net Adjusted Savings (kWh/yr)	12,818
Installed Summer peak kW	Attic Insulation	Total Gross Demand Reduction (kW)	7.1
	Attic Insulation	Net Adjusted Demand Reduction (kW)	5.7
Installed Winter peak kW	Attic Insulation	Total Gross Demand Reduction (kW)	12.7
	Attic Insulation	Net Adjusted Demand Reduction (kW)	10.2
	Bathroom Aerator	Total Participants	15
Installed kWh/year	Bathroom Aerator	Total Gross Energy Savings (kWh/yr)	580
	Bathroom Aerator	Net Adjusted Savings (kWh/yr)	464
Installed Summer peak kW	Bathroom Aerator	Total Gross Demand Reduction (kW)	0.2
	Bathroom Aerator	Net Adjusted Demand Reduction (kW)	0.1
Installed Winter peak kW	Bathroom Aerator	Total Gross Demand Reduction (kW)	0.2
	Bathroom Aerator	Net Adjusted Demand Reduction (kW)	0.1
	Duct Sealing	Total Participants	6
Installed kWh/year	Duct Sealing	Total Gross Energy Savings (kWh/yr)	13,343
	Duct Sealing	Net Adjusted Savings (kWh/yr)	10,675
Installed Summer peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	6.0
	Duct Sealing	Net Adjusted Demand Reduction (kW)	4.8
Installed Winter peak kW	Duct Sealing	Total Gross Demand Reduction (kW)	7.0
	Duct Sealing	Net Adjusted Demand Reduction (kW)	5.6
	Floor Insulation	Total Participants	10
Installed kWh/year	Floor Insulation	Total Gross Energy Savings (kWh/yr)	2,701
	Floor Insulation	Net Adjusted Savings (kWh/yr)	2,160
Installed Summer peak kW	Floor Insulation	Total Gross Demand Reduction (kW)	0.8
	Floor Insulation	Net Adjusted Demand Reduction (kW)	0.6
Installed Winter peak kW	Floor Insulation	Total Gross Demand Reduction (kW)	3.1
	Floor Insulation	Net Adjusted Demand Reduction (kW)	2.5



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NC - Residential Income and Age Qualifying Energy Efficiency Program			2022
Measures			
	40W LED	Total Participants	9
Installed kWh/year	40W LED	Total Gross Energy Savings (kWh/yr)	1,132
	40W LED	Net Adjusted Savings (kWh/yr)	905
Installed Summer peak kW	40W LED	Total Gross Demand Reduction (kW)	0.1
	40W LED	Net Adjusted Demand Reduction (kW)	0.1
Installed Winter peak kW	40W LED	Total Gross Demand Reduction (kW)	0.2
	40W LED	Net Adjusted Demand Reduction (kW)	0.2
	60W LED	Total Participants	13
Installed kWh/year	60W LED	Total Gross Energy Savings (kWh/yr)	2,443
	60W LED	Net Adjusted Savings (kWh/yr)	1,954
Installed Summer peak kW	60W LED	Total Gross Demand Reduction (kW)	0.2
	60W LED	Net Adjusted Demand Reduction (kW)	0.2
Installed Winter peak kW	60W LED	Total Gross Demand Reduction (kW)	0.5
	60W LED	Net Adjusted Demand Reduction (kW)	0.4
	Admin	Total Participants	26
Installed kWh/year	Admin	Total Gross Energy Savings (kWh/yr)	0
	Admin	Net Adjusted Savings (kWh/yr)	0
Installed Summer peak kW	Admin	Total Gross Demand Reduction (kW)	0.0
	Admin	Net Adjusted Demand Reduction (kW)	0.0
Installed Winter peak kW	Admin	Total Gross Demand Reduction (kW)	-
	Admin	Net Adjusted Demand Reduction (kW)	-
	Air Sealing	Total Participants	21
Installed kWh/year	Air Sealing	Total Gross Energy Savings (kWh/yr)	1,445
	Air Sealing	Net Adjusted Savings (kWh/yr)	1,156
Installed Summer peak kW	Air Sealing	Total Gross Demand Reduction (kW)	0.3
	Air Sealing	Net Adjusted Demand Reduction (kW)	0.2
Installed Winter peak kW	Air Sealing	Total Gross Demand Reduction (kW)	1.8
	Air Sealing	Net Adjusted Demand Reduction (kW)	1.4

P.10.3 2022 North Carolina Residential Income and Age Qualifying Energy Efficiency Program (Phase IX) Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
EAL4	Not available	1,454	367	396%	Not Available	Not Available
EAL4	Schedule 1	1,454	367	396%	15,263	10%



P.11 North Carolina Non-Residential Prescriptive Program 2017–2022

P.11.1 2017–2022 North Carolina Non-Residential Prescriptive Annual Indicator Tables

NC - Non-Residential Prescriptive Program			2017	2018	2019	2020	2021	2022	2017-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate							
O&M (\$)		Direct Implementation							
O&M (\$)		Direct EM&V							
O&M (\$)		Indirect Other (Administrative)	\$0	\$10,172	\$10,038	\$19,470	\$21,983	\$357	\$62,021
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$180,139	\$189,380	\$372,698	\$468,837	\$8,552	\$1,219,606
Costs (\$)		Planned	\$0	\$400,909	\$406,529	\$398,979	\$384,330	\$3,149	\$1,593,896
Costs (\$)		Variance	\$0	-\$220,770	-\$217,149	-\$26,281	\$84,507	\$5,404	-\$374,289
		Annual % of Planned	N/A	45%	47%	93%	122%	272%	77%
Participants ¹		Total (Gross)	0	21	36	19	44	0	120
		Planned	0	29	29	29	27	0	114
		Variance	0	-8	7	-10	17	0	6
		Annual % of Planned (Gross)	N/A	72%	124%	66%	163%	N/A	105%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	221,779	227,788	1,671,465	1,073,802	0	3,194,833
		Realization Rate Weighted by Measure	N/A	100%	100%	45%	63%	N/A	59%
		Realization Rate Adjustment (kWh/yr)	0	0	0	-922,714	-392,310	0	-1,315,024
		Realization Rate Adjusted Savings (kWh/yr)	0	221,779	227,788	748,751	681,492	0	1,879,809
		Net-To-Gross Rate Weighted by Measure	N/A	85%	85%	90%	86%	N/A	88%
		Net-To-Gross Adjustment (kWh/yr)	0	-33,267	-34,168	-81,918	-121,248	0	-270,601
		Net Adjusted Savings (kWh/yr)	0	188,512	193,620	666,832	560,244	0	1,609,208
		Planned Net Savings (kWh/yr)	0	1,822,814	113,588	316,636	2,960,183	0	5,213,221
		Annual % Toward Planned Net Savings	N/A	10.3%	170.5%	210.6%	18.9%	N/A	30.9%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	10,561	6,327	87,972	24,405	N/A	26,624
		Avg. Net Savings Per Participant (kWh/yr)	N/A	8,977	5,378	35,096	12,733	N/A	13,410
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	25.3	30.4	179.6	182.0	0.0	417.2
		Realization Rate Weighted by Measure	N/A	100%	100%	74%	84%	N/A	82%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	-46.0	-28.9	0.0	-75.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	25.3	30.4	133.5	153.1	0.0	342.3
		Net-To-Gross Rate Weighted by Measure	N/A	85%	85%	86%	80%	N/A	83%
		Net-To-Gross Adjustment (kW)	0.0	-3.8	-4.6	-25.9	-36.4	0.0	-70.7
		Net Adjusted Demand Reduction (kW)	0.0	21.5	25.8	112.2	120.8	0.0	280.3
		Planned Net Savings (kW)	0.0	292.0	46.5	126.2	442.7	0.0	907.4
		Annual % Toward Planned Net Reduction	N/A	7.35%	55.5%	88.9%	27.3%	N/A	30.9%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	1.2	0.8	9.5	4.1	N/A	3.5
		Avg. Net Demand Reduction Per Participant (kW)	N/A	1.0	0.7	5.9	2.7	N/A	2.3
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	173.4	0.0	173.4
		Realization Rate Weighted by Measure	-	-	-	-	79%	N/A	79%
		Realization Rate Adjustment (kW)	-	-	-	-	-35.8	0.0	-35.8
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	137.6	0.0	137.6
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	80%	N/A	80%
		Net-To-Gross Adjustment (kW)	-	-	-	-	-34.7	0.0	-34.7
		Net Adjusted Demand Reduction (kW)	-	-	-	-	108.8	0.0	108.8
		Planned Net Savings (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Annual % Toward Planned Net Reduction	-	-	-	-	N/A	N/A	N/A
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	3.9	N/A	3.9
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	2.5	N/A	2.5
Measures									
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$484	\$355	\$522	\$514	\$517	\$517
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.05	\$0.04	\$0.02	\$0.02	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	N/A	\$403	\$363	\$169	\$148	\$149	\$149
		Cum. \$EM&V per \$Total	N/A	4.7%	4.2%	3.3%	4.6%	5.2%	5.2%
		Cum. \$Rebate per Participant (Gross)	N/A	\$3,919	\$2,838	\$5,558	\$6,161	\$6,161	\$6,161



P.11.2 2022 North Carolina Non-Residential Prescriptive Monthly Indicator Tables

Category	Measure	Indicator	2022												2021 Total				
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC					
O&M (\$)	Direct Rebate																		
	Direct Implementation		\$3	\$-44	\$50	\$35	\$39	\$51	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
O&M (\$)	Direct EM&V																		
O&M (\$)	Indirect Other (Administrative)																		
Capital (\$)	Direct Implementation																		
Costs (\$)	Total		\$63	\$1,046	\$1,195	\$649	\$923	\$1,226	\$0	\$2,038	\$370	\$241	\$582	\$0	\$6,552	\$1,219,606			
Costs (\$)	Planned		\$282	\$262	\$262	\$262	\$262	\$262	\$262	\$262	\$262	\$262	\$262	\$262	\$262	\$3,149	\$1,593,896		
Costs (\$)	Variance		-\$180	\$783	\$933	\$587	\$661	-\$964	-\$262	\$1,775	\$107	-\$21	\$320	-\$262	\$5,404	-\$374,289			
	Annual % of Planned		2.6%	35.8%	73.8%	100.8%	130.1%	169.0%	169.0%	233.7%	246.5%	253.1%	271.6%	271.6%	272%	77%			
Participants ¹	Total (Gross)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	
	Planned		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	
	Variance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
	Annual % of Planned (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	105%	
Installed kWh/year	Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,194,833	
	Realization Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	59%	
	Realization Rate Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1,315,024	
	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,879,809	
	Net-To-Gross Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	88%	
	Net-To-Gross Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-270,601	
	Net Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,609,208	
	Planned Net Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,213,221	
	Annual % Toward Planned Net Savings		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30.9%
	Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13,410
Installed Summer peak kW	Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	417.2	
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	82%	
	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-75.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	342.3	
	Net-To-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	83%	
	Net-To-Gross Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-70.7	
	Net Adjusted Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	280.3	
	Planned Net Savings (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	907.4	
	Annual % Toward Planned Net Reduction		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30.9%
	Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.3
Installed Winter peak kW	Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	173.4	
	Realization Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79%	
	Realization Rate Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-35.8	
	Realization Rate Adjusted Gross Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	137.6	
	Net-To-Gross Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80%	
	Net-To-Gross Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-34.7	
	Net Adjusted Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108.8	
	Planned Net Savings (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	
	Annual % Toward Planned Net Reduction		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	
	Avg. Net Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5
Program Performance	Cum. \$Admin. per Participant (Gross)		\$514	\$514	\$515	\$515	\$515	\$516	\$516	\$516	\$517	\$517	\$517	\$517	\$517	\$517	\$517	\$517	
	Cum. \$Admin. per kWh/year (Gross)		\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	
	Cum. \$Admin. per kW (Gross)		\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	
	Cum. \$EM&V per \$1 Total		4.6%	4.7%	4.8%	4.8%	4.9%	5.0%	5.0%	5.0%	5.1%	5.2%	5.2%	5.2%	5.2%	5.2%	5.2%	5.2%	
	Cum. \$Rebate per Participant (Gross)		\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	\$6,161	



P.11.3 2018–2022 North Carolina Non-Residential Prescriptive Measure Indicator Tables

NC - Non-Residential Prescriptive Program			2018	2019	2020	2021	2022	2017-2022
Measures	Strip Curtain	Total Participants	2	13	0	0	0	15
Installed kWh/year	Strip Curtain	Total Gross Energy Savings (kWh/yr)	180	13,024	0	0	0	13,204
	Strip Curtain	Net Adjusted Savings (kWh/yr)	153	11,070	0	0	0	11,223
Installed Summer peak kW	Strip Curtain	Total Gross Demand Reduction (kW)	0.0	1.5	0.0	0.0	0.0	1.5
	Strip Curtain	Net Adjusted Demand Reduction (kW)	0.0	1.3	0.0	0.0	0.0	1.3
Installed Winter peak kW	Strip Curtain	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Strip Curtain	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	VSDs at Kitchen Exhaust Fan	Total Participants	0	0	0	0	0	0
Installed kWh/year	VSDs at Kitchen Exhaust Fan	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0
	VSDs at Kitchen Exhaust Fan	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0
Installed Summer peak kW	VSDs at Kitchen Exhaust Fan	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
	VSDs at Kitchen Exhaust Fan	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	VSDs at Kitchen Exhaust Fan	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	VSDs at Kitchen Exhaust Fan	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0

NC - Non-Residential Prescriptive Program			2018	2019	2020	2021	2022	2017-2022
Measures	Ice Maker	Total Participants	0	0	0	0	0	0
Installed kWh/year	Ice Maker	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0
	Ice Maker	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0
Installed Summer peak kW	Ice Maker	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
	Ice Maker	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Ice Maker	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Ice Maker	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	Low/No Sweat Door Film	Total Participants	0	0	0	0	0	0
Installed kWh/year	Low/No Sweat Door Film	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0
	Low/No Sweat Door Film	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0
Installed Summer peak kW	Low/No Sweat Door Film	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
	Low/No Sweat Door Film	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Low/No Sweat Door Film	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Low/No Sweat Door Film	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	Night Cover	Total Participants	0	0	0	0	0	0
Installed kWh/year	Night Cover	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0
	Night Cover	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0
Installed Summer peak kW	Night Cover	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
	Night Cover	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Night Cover	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Night Cover	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	Steam Cooker	Total Participants	0	0	0	0	0	0
Installed kWh/year	Steam Cooker	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0
	Steam Cooker	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0
Installed Summer peak kW	Steam Cooker	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
	Steam Cooker	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Steam Cooker	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Steam Cooker	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0



NC - Non-Residential Prescriptive Program			2018	2019	2020	2021	2022	2017-2022
Measures								
	Evaporator Fan Control (Cooler and Freezer)	Total Participants	0	0	0	0	0	0
Installed kWh/year	Evaporator Fan Control (Cooler and Freezer)	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0
	Evaporator Fan Control (Cooler and Freezer)	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0
Installed Summer peak kW	Evaporator Fan Control (Cooler and Freezer)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
	Evaporator Fan Control (Cooler and Freezer)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Evaporator Fan Control (Cooler and Freezer)	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Evaporator Fan Control (Cooler and Freezer)	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	Freezer and Refrigerator	Total Participants	0	2	1	0	0	3
Installed kWh/year	Freezer and Refrigerator	Total Gross Energy Savings (kWh/yr)	0	3,794	494	0	0	4,287
	Freezer and Refrigerator	Net Adjusted Savings (kWh/yr)	0	3,225	389	0	0	3,614
Installed Summer peak kW	Freezer and Refrigerator	Total Gross Demand Reduction (kW)	0.0	0.5	0.1	0.0	0.0	0.6
	Freezer and Refrigerator	Net Adjusted Demand Reduction (kW)	0.0	0.4	0.1	0.0	0.0	0.5
Installed Winter peak kW	Freezer and Refrigerator	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Freezer and Refrigerator	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	Griddle	Total Participants	0	0	1	0	0	1
Installed kWh/year	Griddle	Total Gross Energy Savings (kWh/yr)	0	0	4,510	0	0	4,510
	Griddle	Net Adjusted Savings (kWh/yr)	0	0	3,834	0	0	3,834
Installed Summer peak kW	Griddle	Total Gross Demand Reduction (kW)	0.0	0.0	0.7	0.0	0.0	0.7
	Griddle	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.6	0.0	0.0	0.6
Installed Winter peak kW	Griddle	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Griddle	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	Hot Food Holder	Total Participants	0	2	0	0	0	2
Installed kWh/year	Hot Food Holder	Total Gross Energy Savings (kWh/yr)	0	4,790	0	0	0	4,790
	Hot Food Holder	Net Adjusted Savings (kWh/yr)	0	4,072	0	0	0	4,072
Installed Summer peak kW	Hot Food Holder	Total Gross Demand Reduction (kW)	0.0	1.3	0.0	0.0	0.0	1.3
	Hot Food Holder	Net Adjusted Demand Reduction (kW)	0.0	1.1	0.0	0.0	0.0	1.1
Installed Winter peak kW	Hot Food Holder	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Hot Food Holder	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0



NC - Non-Residential Prescriptive Program			2018	2019	2020	2021	2022	2017-2022
Measures								
	Door Gasket	Total Participants	21	33	0	0	0	54
Installed kWh/year	Door Gasket	Total Gross Energy Savings (kWh/yr)	219,856	201,477	0	0	0	421,333
	Door Gasket	Net Adjusted Savings (kWh/yr)	186,877	171,255	0	0	0	358,133
Installed Summer peak kW	Door Gasket	Total Gross Demand Reduction (kW)	25.0	23.0	0.0	0.0	0.0	48.0
	Door Gasket	Net Adjusted Demand Reduction (kW)	21.3	19.5	0.0	0.0	0.0	40.8
Installed Winter peak kW	Door Gasket	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Door Gasket	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	Duct Test and Seal	Total Participants	0	3	13	31	0	47
Installed kWh/year	Duct Test and Seal	Total Gross Energy Savings (kWh/yr)	0	1,539	18,021	110,907	0	130,468
	Duct Test and Seal	Net Adjusted Savings (kWh/yr)	0	1,308	10,813	66,544	0	78,665
Installed Summer peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	0.0	2.2	9.0	37.7	0.0	48.9
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	0.0	1.9	5.2	21.8	0.0	28.8
Installed Winter peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	-	-	-	69.4	-	69.4
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	-	-	-	40.1	-	40.1
	ECM at Evaporator Fan	Total Participants	0	0	0	0	0	0
Installed kWh/year	ECM at Evaporator Fan	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0
	ECM at Evaporator Fan	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0
Installed Summer peak kW	ECM at Evaporator Fan	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
	ECM at Evaporator Fan	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	ECM at Evaporator Fan	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	ECM at Evaporator Fan	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	Electric Fryer	Total Participants	0	0	1	0	0	1
Installed kWh/year	Electric Fryer	Total Gross Energy Savings (kWh/yr)	0	0	6,011	0	0	6,011
	Electric Fryer	Net Adjusted Savings (kWh/yr)	0	0	5,109	0	0	5,109
Installed Summer peak kW	Electric Fryer	Total Gross Demand Reduction (kW)	0.0	0.0	0.9	0.0	0.0	0.9
	Electric Fryer	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.8	0.0	0.0	0.8
Installed Winter peak kW	Electric Fryer	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Electric Fryer	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0

NC - Non-Residential Prescriptive Program			2018	2019	2020	2021	2022	2017-2022
Measures								
	AC Tune-Ups	Total Participants	0	3	28	46	0	77
Installed kWh/year	AC Tune-Ups	Total Gross Energy Savings (kWh/yr)	0	963	65,085	260,499	0	326,547
	AC Tune-Ups	Net Adjusted Savings (kWh/yr)	0	819	57,873	231,636	0	290,328
Installed Summer peak kW	AC Tune-Ups	Total Gross Demand Reduction (kW)	0.0	1.6	54.5	93.5	0.0	149.6
	AC Tune-Ups	Net Adjusted Demand Reduction (kW)	0.0	1.4	41.0	70.3	0.0	112.8
Installed Winter peak kW	AC Tune-Ups	Total Gross Demand Reduction (kW)	-	-	-	53.1	-	53.1
	AC Tune-Ups	Net Adjusted Demand Reduction (kW)	-	-	-	39.9	-	39.9
	Condenser Coil Clean	Total Participants	0	0	15	3	0	18
Installed kWh/year	Condenser Coil Clean	Total Gross Energy Savings (kWh/yr)	0	0	1,576,700	702,396	0	2,279,096
	Condenser Coil Clean	Net Adjusted Savings (kWh/yr)	0	0	588,267	262,064	0	850,331
Installed Summer peak kW	Condenser Coil Clean	Total Gross Demand Reduction (kW)	0.0	0.0	114.2	50.9	0.0	165.1
	Condenser Coil Clean	Net Adjusted Demand Reduction (kW)	0.0	0.0	64.4	28.7	0.0	93.2
Installed Winter peak kW	Condenser Coil Clean	Total Gross Demand Reduction (kW)	-	-	-	50.9	-	50.9
	Condenser Coil Clean	Net Adjusted Demand Reduction (kW)	-	-	-	28.7	-	28.7
	Convection Oven	Total Participants	0	0	1	0	0	1
Installed kWh/year	Convection Oven	Total Gross Energy Savings (kWh/yr)	0	0	644	0	0	644
	Convection Oven	Net Adjusted Savings (kWh/yr)	0	0	547	0	0	547
Installed Summer peak kW	Convection Oven	Total Gross Demand Reduction (kW)	0.0	0.0	0.1	0.0	0.0	0.1
	Convection Oven	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.1	0.0	0.0	0.1
Installed Winter peak kW	Convection Oven	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Convection Oven	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0
	Door Closer	Total Participants	10	13	0	0	0	23
Installed kWh/year	Door Closer	Total Gross Energy Savings (kWh/yr)	1,743	2,201	0	0	0	3,944
	Door Closer	Net Adjusted Savings (kWh/yr)	1,482	1,871	0	0	0	3,352
Installed Summer peak kW	Door Closer	Total Gross Demand Reduction (kW)	0.2	0.3	0.0	0.0	0.0	0.5
	Door Closer	Net Adjusted Demand Reduction (kW)	0.2	0.2	0.0	0.0	0.0	0.4
Installed Winter peak kW	Door Closer	Total Gross Demand Reduction (kW)	-	-	-	-	-	0.0
	Door Closer	Net Adjusted Demand Reduction (kW)	-	-	-	-	-	0.0



P.11.4 2018–2022 North Carolina Non-Residential Prescriptive Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CNRP	Not available	13,410	25,024	54%	Not Available	Not Available
CNRP	Schedule 6P	105,934	25,024	423%	4,167,890	3%
CNRP	Schedule 5	4,068	25,024	16%	33,652	12%
CNRP	Schedule 10	47,235	25,024	189%	6,218,295	1%
CNRP	Schedule 5P	32,127	25,024	128%	120,844	27%

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P.12 North Carolina Non-Residential Prescriptive Enhanced Program 2022

P.12.1 2022 North Carolina Non-Residential Prescriptive Enhanced Program Monthly Indicator Tables

NC - Non-Residential Prescriptive Enhanced Program			2022
Category	Measure	Indicator	Total
O&M (\$)		Direct Rebate	
O&M (\$)		Direct Implementation	
O&M (\$)		Direct EM&V	
O&M (\$)		Indirect Other (Administrative)	\$907
Capital (\$)		Direct Implementation	\$0
Costs (\$)		Total	\$21,735
Costs (\$)		Planned	\$108,401
Costs (\$)		Variance	-\$86,667
		Annual % of Planned	20%
Participants ¹		Total (Gross)	0
		Planned	36
		Variance	-36
		Annual % of Planned (Gross)	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0
		Realization Rate Weighted by Measure	N/A
		Realization Rate Adjustment (kWh/yr)	0
		Realization Rate Adjusted Savings (kWh/yr)	0
		Net-To-Gross Rate Weighted by Measure	N/A
		Net-To-Gross Adjustment (kWh/yr)	0
		Net Adjusted Savings (kWh/yr)	0
		Planned Net Savings (kWh/yr)	971,968
		Annual % Toward Planned Net Savings	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0
		Realization Rate Weighted by Measure	N/A
		Realization Rate Adjustment (kW)	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0
		Net-To-Gross Rate Weighted by Measure	N/A
		Net-To-Gross Adjustment (kW)	0.0
		Net Adjusted Demand Reduction (kW)	0.0
		Planned Net Savings (kW)	205.7
		Annual % Toward Planned Net Reduction	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-
		Realization Rate Weighted by Measure	-
		Realization Rate Adjustment (kW)	-
		Realization Rate Adjusted Gross Demand Reduction (kW)	-
		Net-To-Gross Rate Weighted by Measure	-
		Net-To-Gross Adjustment (kW)	-
		Net Adjusted Demand Reduction (kW)	-
		Planned Net Savings (kW)	-
		Annual % Toward Planned Net Reduction	-
		Avg. Gross Demand Reduction Per Participant (kW)	-
		Avg. Net Demand Reduction Per Participant (kW)	-
Measures			
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A
		Cum. \$Admin. per kW (Gross)	N/A
		Cum. \$EM&V per \$Total	14.2%
		Cum. \$Rebate per Participant (Gross)	N/A



P.13 North Carolina Non-Residential Heating and Cooling Efficiency Program (DSM VII) 2019–2022

P.13.1 2019–2022 North Carolina Non-Residential Heating and Cooling Efficiency Program (DSM VII) Annual Indicator Table

NC - Non-Residential Heating and Cooling Efficiency Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$0	\$1,598	\$1,582	\$1,825	\$5,004
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$30,873	\$33,730	\$43,699	\$108,302
Costs (\$)		Planned	\$0	\$122,049	\$116,478	\$121,715	\$360,241
Costs (\$)		Variance	\$0	-\$91,176	-\$82,748	-\$78,016	-\$251,940
		Annual % of Planned	N/A	25%	29%	36%	30%
Participants ¹		Total (Gross)	0	0	1	1	2
		Planned	0	42	42	42	126
		Variance	0	-42	-41	-41	-124
		Annual % of Planned (Gross)	N/A	0%	2%	2%	2%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	2,946	139,559	142,505
		Realization Rate Weighted by Measure	N/A	N/A	100%	100%	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	2,946	139,559	142,505
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	70%	70%	70%
		Net-To-Gross Adjustment (kWh/yr)	0	0	-884	-41,868	-42,751
		Net Adjusted Savings (kWh/yr)	0	0	2,062	97,691	99,753
		Planned Net Savings (kWh/yr)	0	522,168	522,168	522,168	1,566,505
		Annual % Toward Planned Net Savings	N/A	0%	0.39%	18.7%	6.37%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	2,946	139,559	71,252
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	2,062	97,691	49,877
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.5	17.6	18.1
		Realization Rate Weighted by Measure	N/A	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.5	17.6	18.1
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	70%	70%	70%
		Net-To-Gross Adjustment (kW)	0.0	0.0	-0.2	-5.3	-5.4
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.4	12.3	12.7
		Planned Net Savings (kW)	0.0	74.5	74.5	74.5	223.5
		Annual % Toward Planned Net Reduction	N/A	0%	0.47%	16.5%	5.67%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	0.5	17.6	9.1
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	0.4	12.3	6.3
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	0.5	0.0	0.5
		Realization Rate Weighted by Measure	-	-	100%	N/A	100%
		Realization Rate Adjustment (kW)	-	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	0.5	0.0	0.5
		Net-To-Gross Rate Weighted by Measure	-	-	70%	N/A	70%
		Net-To-Gross Adjustment (kW)	-	-	-0.2	0.0	-0.2
		Net Adjusted Demand Reduction (kW)	-	-	0.4	0.0	0.4
		Planned Net Savings (kW)	0.0	0.0	98.9	98.9	197.9
		Annual % Toward Planned Net Reduction	-	-	0.36%	0%	0.18%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	0.5	0.0	0.3
		Avg. Net Demand Reduction Per Participant (kW)	-	-	0.4	0.0	0.2
Measures							
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	\$3,179	\$2,502	\$2,502
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	\$1	\$0.04	\$0.04
		Cum. \$Admin. per kW (Gross)	N/A	N/A	\$6,347	\$276	\$276
		Cum. \$EM&V per \$Total	N/A	14.9%	18.0%	16.8%	16.8%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	\$759	\$6,587	\$6,587



P.13.2 2022 North Carolina Non-Residential Heating and Cooling Efficiency Program (DSM VII) Monthly Indicator Table

NC - Non-Residential Heating and Cooling Efficiency Program		2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2019-2021 Total
Category	Measure	Indicator													
O&M (\$)	Direct Rebate														
O&M (\$)	Direct Implementation														
O&M (\$)	Direct EM&V														
O&M (\$)	Indirect Other (Administrative)	\$93	\$109	\$96	\$112	\$121	\$109	\$80	\$150	\$647	\$110	\$118	\$80	\$1,825	\$5,004
Capital (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total	\$2,222	\$2,601	\$2,297	\$2,678	\$2,901	\$2,612	\$1,925	\$3,599	\$15,492	\$2,631	\$2,817	\$1,925	\$43,699	\$108,302
Costs (\$)	Planned	\$10,143	\$10,143	\$10,143	\$10,143	\$10,143	\$10,143	\$10,143	\$10,143	\$10,143	\$10,143	\$10,143	\$10,143	\$121,716	\$360,224
Costs (\$)	Variance	-\$7,921	-\$7,541	-\$7,846	-\$7,465	-\$7,242	-\$7,531	-\$8,218	-\$6,544	\$5,349	-\$7,512	-\$7,326	-\$8,218	-\$78,016	-\$251,919
	Annual % of Planned	1.8%	4.0%	5.9%	8.1%	10.4%	12.6%	14.2%	17.1%	29.8%	32.0%	34.3%	35.9%	36%	30%
Participants ¹	Total (Gross)	0	0	0	0	0	0	0	0	1	0	0	0	1	1
	Planned	9	3	3	3	3	3	3	3	3	3	3	3	42	12
	Variance	-9	-3	-3	-3	-3	-3	-3	-3	-2	-3	-3	-3	-41	-12
	Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Installed kWh/year	Total														
	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	139,559	0	0	0	139,559	142,505
	Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	N/A	N/A	N/A	100%	100%
	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	139,559	0	0	0	139,559	142,505
	Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70%	N/A	N/A	N/A	70%	70%
	Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	-41,868	0	0	0	-41,868	-42,751
	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	97,691	0	0	0	97,691	99,753
	Planned Net Savings (kWh/yr)	111,893	37,298	37,298	37,298	37,298	37,298	37,298	37,298	37,298	37,298	37,298	37,298	522,168	1,566,505
	Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0%	18.7%	18.7%	18.7%	18.7%	18.7%	6.37%
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	139,559	N/A	N/A	N/A	139,559	71,252
	Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	97,691	N/A	N/A	N/A	97,691	49,877
Installed Summer peak kW	Total														
	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0	0.0	17.6	18.1
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0	0.0	17.6	18.1
	Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	70%	100%	100%	100%	70%	70%
	Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-5.3	0.0	0.0	0.0	-5.3	-5.4
	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0	0.0	12.3	12.7
	Planned Net Savings (kW)	16.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	74.5	223.5
	Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	16.5%	16.5%	16.5%	16.5%	16.5%	5.67%
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.6	N/A	N/A	N/A	17.6	9.1
	Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12.3	N/A	N/A	N/A	12.3	6.3
Installed Winter peak kW	Total														
	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
	Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	100%
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
	Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	70%
	Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2
	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
	Planned Net Savings (kW)	21.2	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	98.9	197.9
	Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.18%
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.3
	Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.2
Measures															
Program Performance															
	Cum. \$Admin. per Participant (Gross)	\$3,272	\$3,381	\$3,476	\$3,588	\$3,709	\$3,818	\$3,899	\$4,049	\$2,348	\$2,403	\$2,462	\$2,502	\$2,502	\$2,502
	Cum. \$Admin. per kWh/year (Gross)	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$0.03	\$0.03	\$0.03	\$0.04	\$0.04	\$0.04
	Cum. \$Admin. per kW (Gross)	\$6,532	\$6,749	\$6,941	\$7,164	\$7,406	\$7,623	\$7,784	\$8,084	\$259	\$265	\$272	\$276	\$276	\$276
	Cum. \$EM&V per \$Total	17.4%	17.4%	17.3%	17.6%	17.9%	18.4%	18.0%	19.0%	16.6%	16.8%	17.1%	16.8%	16.8%	16.8%
	Cum. \$Rebate per Participant (Gross)	\$759	\$759	\$759	\$759	\$759	\$759	\$759	\$759	\$6,587	\$6,587	\$6,587	\$6,587	\$6,587	\$6,587

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P.13.3 2020–2022 North Carolina Non-Residential Heating and Cooling Efficiency Program (DSM VII) Measure Indicator Table

NC - Non-Residential Heating and Cooling Efficiency Program			2019	2020	2021	2022	2019-2023
Measures							
	Variable Frequency Drives (VFD)	Total Participants	0	0	0	1	1
Installed kWh/year	Variable Frequency Drives (VFD)	Total Gross Energy Savings (kWh/yr)	0	0	0	62,314	62,314
	Variable Frequency Drives (VFD)	Net Adjusted Savings (kWh/yr)	0	0	0	43,620	43,620
Installed Summer peak kW	Variable Frequency Drives (VFD)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Variable Frequency Drives (VFD)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Variable Frequency Drives (VFD)	Total Gross Demand Reduction (kW)	-	-	-	0.0	0.0
	Variable Frequency Drives (VFD)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0	0.0

NC - Non-Residential Heating and Cooling Efficiency Program			2019	2020	2021	2022	2019-2023
Measures							
	Chiller Upgrade	Total Participants	0	0	0	0	0
Installed kWh/year	Chiller Upgrade	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0
	Chiller Upgrade	Net Adjusted Savings (kWh/yr)	0	0	0	0	0
Installed Summer peak kW	Chiller Upgrade	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Chiller Upgrade	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Chiller Upgrade	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
	Chiller Upgrade	Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0
	Economizers	Total Participants	0	0	1	1	2
Installed kWh/year	Economizers	Total Gross Energy Savings (kWh/yr)	0	0	1,025	11,340	12,365
	Economizers	Net Adjusted Savings (kWh/yr)	0	0	718	7,938	8,656
Installed Summer peak kW	Economizers	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
	Economizers	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
Installed Winter peak kW	Economizers	Total Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
	Economizers	Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0	0.0
	Heat Pump Upgrade	Total Participants	0	0	1	0	1
Installed kWh/year	Heat Pump Upgrade	Total Gross Energy Savings (kWh/yr)	0	0	1,921	0	1,921
	Heat Pump Upgrade	Net Adjusted Savings (kWh/yr)	0	0	1,345	0	1,345
Installed Summer peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	0.0	0.0	0.5	0.0	0.5
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.4	0.0	0.4
Installed Winter peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	-	-	0.5	-	0.5
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	-	-	0.4	-	0.4
	Unitary AC	Total Participants	0	0	0	1	1
Installed kWh/year	Unitary AC	Total Gross Energy Savings (kWh/yr)	0	0	0	65,905	65,905
	Unitary AC	Net Adjusted Savings (kWh/yr)	0	0	0	46,133	46,133
Installed Summer peak kW	Unitary AC	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	17.6	17.6
	Unitary AC	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	12.3	12.3
Installed Winter peak kW	Unitary AC	Total Gross Demand Reduction (kW)	-	-	-	0.0	0.0
	Unitary AC	Net Adjusted Demand Reduction (kW)	-	-	-	0.0	0.0

P.13.4 2020–2022 North Carolina Non-Residential Heating and Cooling Efficiency Program (DSM VII) Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CHV3	Not available	49,877	12,433	401%	Not Available	Not Available
CHV3	Schedule 10	97,691	12,433	786%	6,218,295	2%
CHV3	Schedule 5P	2,062	12,433	17%	120,844	2%



P.14 North Carolina Non-Residential Lighting Systems & Controls Program (DSM Phase VII) 2019-2022

P.14.1 2019–2022 North Carolina Non-Residential Lighting Systems & Controls (DSM VII) Annual Indicator Table

NC - Non-Residential Lighting Systems & Controls Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$0	\$7,657	\$4,360	\$8,727	\$20,744
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$160,883	\$92,989	\$209,012	\$462,884
Costs (\$)		Planned	\$0	\$184,522	\$136,425	\$141,758	\$462,705
Costs (\$)		Variance	\$0	-\$23,639	-\$43,436	\$67,255	\$179
		Annual % of Planned	N/A	87%	68%	147%	100%
Participants ¹		Total (Gross)	0	9	5	12	26
		Planned	0	40	22	22	84
		Variance	0	-31	-17	-10	-58
		Annual % of Planned (Gross)	N/A	23%	23%	55%	31%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	111,813	189,982	1,478,591	1,780,386
		Realization Rate Weighted by Measure	N/A	124%	124%	124%	124%
		Realization Rate Adjustment (kWh/yr)	0	26,835	45,596	354,862	427,293
		Realization Rate Adjusted Savings (kWh/yr)	0	138,648	235,578	1,833,452	2,207,678
		Net-To-Gross Rate Weighted by Measure	N/A	45%	45%	45%	45%
		Net-To-Gross Adjustment (kWh/yr)	0	-76,257	-129,568	-1,008,399	-1,214,223
		Net Adjusted Savings (kWh/yr)	0	62,392	106,010	825,054	993,455
		Planned Net Savings (kWh/yr)	0	840,169	425,897	425,897	1,691,962
		Annual % Toward Planned Net Savings	N/A	7.43%	24.9%	193.7%	58.7%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	12,424	37,996	123,216	68,476
		Avg. Net Savings Per Participant (kWh/yr)	N/A	6,932	21,202	68,754	38,210
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	5.3	41.2	323.1	369.6
		Realization Rate Weighted by Measure	N/A	102%	102%	102%	102%
		Realization Rate Adjustment (kW)	0.0	0.1	0.8	6.5	7.4
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	5.4	42.0	329.5	377.0
		Net-To-Gross Rate Weighted by Measure	N/A	45%	45%	45%	45%
		Net-To-Gross Adjustment (kW)	0.0	-2.9	-22.7	-177.7	-203.3
		Net Adjusted Demand Reduction (kW)	0.0	2.5	18.9	148.3	169.7
		Planned Net Savings (kW)	0.0	233.7	91.9	91.9	417.4
		Annual % Toward Planned Net Reduction	N/A	1.05%	20.6%	161.4%	40.6%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	0.6	8.2	26.9	14.2
		Avg. Net Demand Reduction Per Participant (kW)	N/A	0.3	3.8	12.4	6.5
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	17.3	107.8	125.2
		Realization Rate Weighted by Measure	-	-	99%	99%	99%
		Realization Rate Adjustment (kW)	-	-	-0.2	-1.1	-1.3
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	17.2	106.7	123.9
		Net-To-Gross Rate Weighted by Measure	-	-	45%	45%	45%
		Net-To-Gross Adjustment (kW)	-	-	-9.5	-59.3	-68.8
		Net Adjusted Demand Reduction (kW)	-	-	7.7	48.0	55.8
		Planned Net Savings (kW)	0.0	0.0	84.8	84.8	169.7
		Annual % Toward Planned Net Reduction	-	-	9.10%	56.6%	32.9%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	3.5	9.0	7.4
		Avg. Net Demand Reduction Per Participant (kW)	-	-	1.5	4.0	3.3
Measures							
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$851	\$858	\$798	\$798
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.07	\$0.04	\$0.01	\$0.01
		Cum. \$Admin. per kW (Gross)	N/A	\$1,434	\$258	\$56	\$56
		Cum. \$EM&V per \$Total	N/A	3.3%	5.1%	5.6%	5.6%
		Cum. \$Rebate per Participant (Gross)	N/A	\$10,189	\$8,063	\$9,200	\$9,200



P.14.2 2022 North Carolina Non-Residential Lighting Systems & Controls (DSM Phase VII) Monthly Indicator Tables

Category	Measure	Indicator	2022												2019-2022 Total			
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
O&M (\$)	Direct Rebate																	
	Direct Implementation																	
	Direct EM&V																	
	Indirect Other (Administrative)																	
Capital (\$)																		
Costs (\$)	Total	\$4,654	\$6,242	\$5,695	\$13,119	\$7,951	\$6,387	\$4,785	\$8,459	\$101,511	\$8,124	\$8,589	\$33,029	\$209,012	\$462,884	\$141,788	\$462,705	
	Planned	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	\$11,813	
Costs (\$)	Variance	-\$7,159	-\$5,571	-\$6,118	\$1,008	-\$3,862	\$5,426	-\$7,029	-\$3,354	\$89,698	-\$3,688	-\$2,966	\$21,215	\$167,285	\$179	\$167,285	\$179	
	Annual % of Planned	3.3%	7.7%	11.7%	21.2%	26.7%	31.2%	34.6%	40.6%	112.2%	117.9%	124.1%	147.4%	147%	100%	147%	100%	
Participants ¹	Total (Gross)	0	0	0	2	1	0	1	0	1	1	1	0	1	6	12	26	
	Planned	11	1	1	1	1	1	1	1	1	1	1	1	1	1	22	84	
	Variance	-11	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-10	-58	
	Annual % of Planned (Gross)	0%	0%	0%	9%	14%	14%	14%	14%	18%	23%	23%	27%	55%	95%	95%	31%	
Installed kWh/year	Total	0	0	0	63,638	15,335	0	0	8,261	1,008,355	0	10,204	372,598	1,478,591	1,780,386	1,478,591	1,780,386	
	Realization Rate Weighted by Measure	N/A	N/A	N/A	124%	124%	N/A	N/A	124%	124%	124%	124%	124%	124%	124%	124%	124%	
	Realization Rate Adjustment (kWh/yr)	0	0	0	1,983	3,680	0	0	1,983	242,005	0	2,449	89,423	354,862	427,293	354,862	427,293	
	Realization Rate Adjusted Savings (kWh/yr)	0	0	0	79,159	19,015	0	0	10,244	1,250,361	0	12,652	462,021	1,633,452	2,207,678	1,633,452	2,207,678	
	Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	45%	45%	N/A	N/A	45%	45%	45%	45%	45%	45%	45%	45%	45%	
	Net-To-Gross Adjustment (kWh/yr)	0	0	0	-43,537	-10,458	0	0	-5,634	-687,688	0	-6,959	-254,112	-1,008,389	-1,214,223	-1,008,389	-1,214,223	
	Net Adjusted Savings (kWh/yr)	0	0	0	35,621	8,557	0	0	4,610	562,662	0	5,694	207,910	825,064	993,455	825,064	993,455	
	Planned Net Savings (kWh/yr)	212,948	19,359	19,359	19,359	19,359	19,359	19,359	19,359	19,359	19,359	19,359	19,359	19,359	19,359	19,359	19,359	
	Annual % Toward Planned Net Savings	0%	0%	0%	8.36%	10.4%	10.4%	10.4%	11.5%	143.6%	143.6%	144.9%	193.7%	425.897	1,691.962	425.897	1,691.962	
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	31,919	15,335	N/A	N/A	8,261	1,008,355	N/A	10,204	62,100	123,216	68,476	123,216	68,476	
	Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	17,811	8,657	N/A	N/A	4,610	562,662	N/A	5,694	34,652	68,754	38,210	68,754	38,210	
	Installed Summer peak kW	Total	0.0	0.0	0.0	1.9	0.5	0.0	0.0	1.8	244.6	0.0	3.3	70.9	323.1	369.5	323.1	369.5
		Realization Rate Weighted by Measure	100%	100%	100%	102%	102%	100%	100%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.1	1.4	6.5	7.4	6.5	7.4	
Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.8	249.5	0.0	3.4	72.3	329.5	377.0	329.5	377.0	
Net-To-Gross Rate Weighted by Measure		100%	100%	100%	45%	45%	100%	100%	45%	45%	45%	45%	45%	45%	45%	45%	45%	
Net-To-Gross Adjustment (kW)		0.0	0.0	0.0	-1.1	-0.3	0.0	0.0	-1.0	-134.5	0.0	-1.8	-39.0	-177.7	-203.3	-177.7	-203.3	
Net Adjusted Demand Reduction (kW)		0.0	0.0	0.0	0.9	0.2	0.0	0.0	0.8	112.3	0.0	1.5	32.5	148.3	169.7	148.3	169.7	
Planned Net Savings (kW)		45.9	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Annual % Toward Planned Net Reduction		0%	0%	0%	0.97%	1.21%	1.21%	1.21%	1.21%	124.3%	124.3%	128.0%	161.4%	161.4%	161.4%	161.4%	161.4%	
Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	0.97	0.47	N/A	N/A	1.8	244.6	N/A	3.3	11.8	26.9	14.2	26.9	14.2	
Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	0.4	0.2	N/A	N/A	0.8	112.3	N/A	1.5	5.4	12.4	6.5	12.4	6.5	
Installed Winter peak kW		Total	0.0	0.0	0.0	8.9	2.1	0.0	0.0	0.7	57.2	0.0	1.3	37.6	107.8	125.2	107.8	125.2
		Realization Rate Weighted by Measure	100%	100%	100%	99%	99%	100%	100%	99%	99%	100%	99%	99%	99%	99%	99%	99%
	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.0	0.0	-0.4	-1.1	-1.3	-1.1	-1.3	
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	8.8	2.1	0.0	0.0	0.7	56.6	0.0	1.3	37.2	106.7	123.9	106.7	123.9	
	Net-To-Gross Rate Weighted by Measure	100%	100%	100%	45%	45%	100%	100%	45%	45%	45%	45%	45%	45%	45%	45%	45%	
	Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	-4.9	-1.2	0.0	0.0	-0.4	-31.4	0.0	-0.7	-20.7	-59.3	-68.8	-59.3	-68.8	
	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	3.9	0.9	0.0	0.0	0.3	25.5	0.0	0.6	16.8	48.0	55.8	48.0	55.8	
	Planned Net Savings (kW)	42.4	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	
	Annual % Toward Planned Net Reduction	0%	0%	0%	4.66%	5.77%	5.77%	5.77%	6.16%	36.2%	36.2%	36.9%	56.6%	56.6%	56.6%	56.6%	56.6%	
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	4.4	2.1	N/A	N/A	0.7	57.2	N/A	1.3	6.3	9.0	7.4	9.0	7.4	
	Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	2.0	0.9	N/A	N/A	0.3	25.5	N/A	0.6	2.8	4.0	3.3	4.0	3.3	
	Program Performance	Cum. \$Admin. per Participant (Gross)	\$372	\$691	\$908	\$929	\$800	\$816	\$627	\$801	\$992	\$1,000	\$988	\$798	\$798	\$798	\$798	\$798
		Cum. \$Admin. per kWh/year (Gross)	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04
Cum. \$EM&V per kW (Gross)		\$262	\$268	\$273	\$274	\$278	\$283	\$287	\$294	\$301	\$306	\$311	\$316	\$321	\$326	\$331	\$336	
Cum. \$EM&V per \$Total		5.0%	5.3%	5.6%	5.7%	5.8%	5.9%	6.0%	6.1%	6.2%	6.3%	6.4%	6.5%	6.6%	6.7%	6.8%	6.9%	
Cum. \$Rebate per Participant (Gross)	\$5,063	\$6,063	\$8,063	\$7,460	\$7,136	\$7,136	\$7,136	\$7,136	\$7,136	\$7,136	\$7,136	\$7,136	\$7,136	\$7,136	\$7,136	\$7,136	\$7,136	



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P.14.3 2020–2022 North Carolina Non-Residential Lighting Systems & Controls (DSM VII) Measure Indicator Table

NC - Non-Residential Lighting Systems & Controls Program			2020	2021	2022	2019-2023
Measures						
	LED Lamps	Total Participants	9	5	12	29
Installed kWh/year	LED Lamps	Total Gross Energy Savings (kWh/yr)	111,813	178,358	1,390,516	1,999,684
	LED Lamps	Net Adjusted Savings (kWh/yr)	62,392	99,524	775,908	1,081,372
Installed Summer peak kW	LED Lamps	Total Gross Demand Reduction (kW)	5.3	39.9	311.9	431.6
	LED Lamps	Net Adjusted Demand Reduction (kW)	2.5	18.3	143.2	197.5
Installed Winter peak kW	LED Lamps	Total Gross Demand Reduction (kW)	-	16.8	105.2	153.2
	LED Lamps	Net Adjusted Demand Reduction (kW)	-	7.7	48.3	70.0
	Occupancy Sensors	Total Participants	0	1	2	4
Installed kWh/year	Occupancy Sensors	Total Gross Energy Savings (kWh/yr)	0	11,624	88,074	106,909
	Occupancy Sensors	Net Adjusted Savings (kWh/yr)	0	6,486	49,146	58,876
Installed Summer peak kW	Occupancy Sensors	Total Gross Demand Reduction (kW)	0.0	1.3	11.2	13.6
	Occupancy Sensors	Net Adjusted Demand Reduction (kW)	0.0	0.6	5.1	6.2
Installed Winter peak kW	Occupancy Sensors	Total Gross Demand Reduction (kW)	-	0.5	2.6	3.6
	Occupancy Sensors	Net Adjusted Demand Reduction (kW)	-	0.2	1.2	1.6
	T8/T5 Lamps	Total Participants	1	0	0	1
Installed kWh/year	T8/T5 Lamps	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	T8/T5 Lamps	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	T8/T5 Lamps	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	T8/T5 Lamps	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	T8/T5 Lamps	Total Gross Demand Reduction (kW)	-	-	-	0.0
	T8/T5 Lamps	Net Adjusted Demand Reduction (kW)	-	-	-	0.0

P.14.4 2020–2022 North Carolina Non-Residential Lighting Systems & Controls (DSM VII) Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CLT3	Not available	38,210	21,004	182%	Not Available	Not Available
CLT3	Schedule 30	8,919	21,004	42%	67,289	13%
CLT3	Schedule 5	12,242	21,004	58%	33,652	36%
CLT3	Schedule 42	5,731	21,004	27%	52,612	11%
CLT3	Schedule 6P	562,662	21,004	2679%	4,167,890	13%
CLT3	Schedule 5P	59,272	21,004	282%	120,844	49%



P.15 North Carolina Non-Residential Small Manufacturing Program (DSM Phase VII) 2019–2022

P.15.1 2019–2022 North Carolina Non-Residential Small Manufacturing (DSM Phase VII) Annual Indicator Table

NC - Non-Residential Small Manufacturing Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$0	\$987	\$809	\$676	\$2,471
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$18,987	\$17,245	\$16,181	\$52,413
Costs (\$)		Planned	\$0	\$77,923	\$76,879	\$79,423	\$234,226
Costs (\$)		Variance	\$0	-\$58,937	-\$59,634	-\$63,242	-\$181,812
		Annual % of Planned	N/A	24%	22%	20%	22%
Participants ¹		Total (Gross)	0	0	0	0	0
		Planned	0	4	4	4	12
		Variance	0	-4	-4	-4	-12
		Annual % of Planned (Gross)	N/A	0%	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0
		Planned Net Savings (kWh/yr)	0	182,761	182,761	182,761	548,282
		Annual % Toward Planned Net Savings	N/A	0%	0%	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	38.5	38.5	38.5	115.4
		Annual % Toward Planned Net Reduction	N/A	0%	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	0.0
		Realization Rate Weighted by Measure	-	-	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	-	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	-	-	0.0
		Net Adjusted Demand Reduction (kW)	-	-	-	-	0.0
		Planned Net Savings (kW)	0.0	0.0	38.5	38.5	77.0
		Annual % Toward Planned Net Reduction	-	-	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-
Measures							
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	N/A	24.4%	20.9%	24.0%	24.0%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A



P.15.2 2022 North Carolina Non-Residential Small Manufacturing (DSM Phase VII) Monthly Indicator Tables

NC - Non-Residential Small Manufacturing Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2019-2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate																		
O&M (\$)		Direct Implementation																		
O&M (\$)		Direct EM&V																		
O&M (\$)		Indirect Other (Administrative)	\$38	\$47	\$49	\$51	\$62	\$57	\$38	\$90	\$53	\$73	\$79	\$38	\$676	\$2,471				
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Costs (\$)		Total	\$920	\$1,121	\$1,162	\$1,219	\$1,489	\$1,365	\$920	\$2,146	\$1,276	\$1,745	\$1,900	\$920	\$16,181	\$52,413				
Costs (\$)		Planned	\$6,619	\$6,619	\$6,619	\$6,619	\$6,619	\$6,619	\$6,619	\$6,619	\$6,619	\$6,619	\$6,619	\$6,619	\$79,423	\$234,226				
Costs (\$)		Variance	-\$5,699	-\$5,498	-\$5,457	-\$5,400	-\$5,129	-\$5,254	-\$5,699	-\$4,473	-\$5,342	-\$4,874	-\$4,718	-\$5,699	-\$63,242	-\$181,812				
		Annual % of Planned	1.2%	2.6%	4.0%	5.6%	7.4%	9.2%	10.3%	13.0%	14.6%	16.8%	19.2%	20.4%	20%	22%				
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
		Planned	4	0	0	0	0	0	0	0	0	0	0	0	4	12				
		Variance	-4	0	0	0	0	0	0	0	0	0	0	0	-4	-12				
		Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
		Planned Net Savings (kWh/yr)	182,761	0	0	0	0	0	0	0	0	0	0	0	182,761	548,282				
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		Planned Net Savings (kW)	38.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.5	115.4				
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	-				N/A
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	-				N/A
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				0.0
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				115.4
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-	-				0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				N/A
		Cum. \$EM&V per \$Total	20.4%	20.4%	20.4%	20.5%	21.1%	21.4%	21.0%	22.5%	22.6%	23.4%	24.4%	24.0%	24.0%	24.0%				24.0%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				N/A

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P.16 North Carolina Non-Residential Window Film Program (DSM Phase VII) 2019–2022

P.16.1 2019–2022 North Carolina Non-Residential Window Film (DSM Phase VII) Annual Indicator Table

NC - Non-Residential Window Film Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$0	\$968	\$917	\$579	\$2,463
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$18,804	\$19,546	\$13,856	\$52,206
Costs (\$)		Planned	\$0	\$28,279	\$27,121	\$28,370	\$83,770
Costs (\$)		Variance	\$0	-\$9,475	-\$7,575	-\$14,514	-\$31,564
		Annual % of Planned	N/A	66%	72%	49%	62%
Participants ¹		Total (Gross)	0	1	1	0	2
		Total Square Feet	0	1,004	295	0	1,299
		Planned Square Feet	0	8,037	8,037	8,037	24,111
		Variance Square Feet	0	-7,033	-7,742	-8,037	-22,812
		Annual % of Planned (Gross)	N/A	12%	4%	0%	5%
Square Feet		Total Square Feet	0	1,004	295	0	1,299
		North Facing	0	254	0	0	254
		East Facing	0	0	0	0	0
		West Facing	0	0	0	0	0
		South Facing	0	750	295	0	1,045
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	17,430	6	0	17,436
		Realization Rate Weighted by Measure	N/A	100%	100%	N/A	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	17,430	6	0	17,436
		Net-To-Gross Rate Weighted by Measure	N/A	80%	80%	N/A	80%
		Net-To-Gross Adjustment (kWh/yr)	0	-3,486	-1	0	-3,487
		Net Adjusted Savings (kWh/yr)	0	13,944	5	0	13,948
		Planned Net Savings (kWh/yr)	0	106,088	106,088	106,088	318,265
		Annual % Toward Planned Net Savings	N/A	13.1%	0.00%	0%	4.38%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	17,430	6	N/A	8,718
		Avg. Gross Savings Per Square Feet (kWh/yr)	N/A	17.4	0.02	N/A	13.4
		Avg. Net Savings Per Participant (kWh/yr)	N/A	13,944	5	N/A	6,974
		Avg. Net Savings Per Square Feet (kWh/yr)	N/A	13.9	0.02	N/A	10.7
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	4.7	0.0	0.0	4.7
		Realization Rate Weighted by Measure	N/A	100%	N/A	N/A	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	4.7	0.0	0.0	4.7
		Net-To-Gross Rate Weighted by Measure	N/A	80%	N/A	N/A	80%
		Net-To-Gross Adjustment (kW)	0.0	-0.9	0.0	0.0	-0.9
		Net Adjusted Demand Reduction (kW)	0.0	3.7	0.0	0.0	3.7
		Planned Net Savings (kW)	0.0	30.9	30.9	30.9	92.6
		Annual % Toward Planned Net Reduction	N/A	12.1%	0%	0%	4.02%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	4.7	0.0	N/A	2.3
		Avg. Gross Demand Reduction Per Square Feet (kW)	N/A	0.005	0.0	N/A	0.004
		Avg. Net Demand Reduction Per Participant (kW)	N/A	3.7	0.0	N/A	1.9
		Avg. Net Demand Reduction Square Feet (kW)	N/A	0.004	0.0	N/A	0.003
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
		Realization Rate Weighted by Measure	-	-	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	-	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	-	-	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	0.0	24.4	24.4	48.7
		Annual % Toward Planned Net Reduction	-	-	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	0.0	N/A	-
		Avg. Gross Demand Reduction Per Square Feet (kW)	-	-	N/A	N/A	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	0.0	N/A	-
		Avg. Net Demand Reduction Square Feet (kW)	-	-	N/A	N/A	-
Measures							
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$968	\$942	\$1,232	\$1,232
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.06	\$0	\$0	\$0
		Cum. \$Admin. per kW (Gross)	N/A	\$208	\$405	\$529	\$529
		Cum. \$EM&V per \$Total	N/A	15.3%	17.9%	17.1%	17.1%
		Cum. \$Rebate per Participant (Gross)	N/A	\$1,004	\$650	\$650	\$650



P.16.2 2022 North Carolina Non-Residential Window Film (DSM Phase VII) Monthly Indicator Tables

NC - Non-Residential Window Film Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	Total	2019-2022	
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		Total	Total	
O&M (\$)		Direct Rebate																
O&M (\$)		Direct Implementation																
O&M (\$)		Direct EM&V																
O&M (\$)		Indirect Other (Administrative)	\$48	\$52	\$48	\$48	\$57	\$37	\$39	\$72	\$44	\$45	\$51	\$39	\$579	\$2,463	\$2,463	
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$1,161	\$1,244	\$1,149	\$1,142	\$1,364	\$888	\$929	\$1,716	\$1,042	\$1,082	\$1,210	\$929	\$13,856	\$52,206	\$52,206	
Costs (\$)		Planned	\$2,364	\$2,364	\$2,364	\$2,364	\$2,364	\$2,364	\$2,364	\$2,364	\$2,364	\$2,364	\$2,364	\$2,364	\$28,370	\$83,770	\$83,770	
Costs (\$)		Variance	-\$1,203	-\$1,120	-\$1,215	-\$1,223	-\$1,000	-\$1,476	-\$1,435	-\$648	-\$1,322	-\$1,282	-\$1,154	-\$1,435	-\$14,514	-\$31,564	-\$31,564	
		Annual % of Planned	4.1%	8.5%	12.5%	16.6%	21.4%	24.5%	27.8%	33.8%	37.5%	41.3%	45.6%	48.8%	49%	62%	62%	
Participants¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
		Total Square Feet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,299
		Planned Square Feet	678	669	669	669	669	669	669	669	669	669	669	669	8,037	24,111	24,111	
		Variance Square Feet	-678	-669	-669	-669	-669	-669	-669	-669	-669	-669	-669	-669	-8,037	-22,812	-22,812	
		Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	
Square Feet		Total Square Feet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,299
		North Facing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	254
		East Facing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		West Facing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		South Facing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,045
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,436
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,436
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80%
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3,487
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,948
		Planned Net Savings (kWh/yr)	8,950	8,831	8,831	8,831	8,831	8,831	8,831	8,831	8,831	8,831	8,831	8,831	106,088	318,265	318,265	
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.38%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8,718
		Avg. Gross Savings Per Square Feet (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.4
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6,974
		Avg. Net Savings Per Square Feet (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.7
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	80%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
		Planned Net Savings (kW)	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	30.9	92.6	92.6	
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.02%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.3
		Avg. Gross Demand Reduction Per Square Feet (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.004
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.9
		Avg. Net Demand Reduction Square Feet (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.003
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73.1
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Gross Demand Reduction Per Square Feet (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Net Demand Reduction Square Feet (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	\$967	\$993	\$1,017	\$1,040	\$1,069	\$1,087	\$1,107	\$1,143	\$1,164	\$1,187	\$1,212	\$1,232	\$1,232	\$1,232	\$1,232	
		Cum. \$Admin. per kWh/year (Gross)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		Cum. \$Admin. per kW (Gross)	\$415	\$427	\$437	\$447	\$459	\$467	\$476	\$491	\$500	\$510	\$521	\$529	\$529	\$529	\$529	
		Cum. \$EM&V per \$Total	17.4%	17.1%	17.1%	17.1%	16.9%	17.0%	16.7%	17.5%	17.4%	17.3%	17.4%	17.1%	17.1%	17.1%	17.1%	
		Cum. \$Rebate per Participant (Gross)	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	



P.16.3 2020–2022 North Carolina Non-Residential Window Film (DSM Phase VII)
Measure Indicator Table

NC - Non-Residential Window Film Program			2020	2021	2022	2019-2022
Measures						
	East	Total Participants	0	0	0	0
Installed kWh/year	East	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	East	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	East	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	East	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	East	Total Gross Demand Reduction (kW)	-	-	-	0.0
	East	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	North	Total Participants	1	0	0	1
Installed kWh/year	North	Total Gross Energy Savings (kWh/yr)	910	0	0	910
	North	Net Adjusted Savings (kWh/yr)	728	0	0	728
Installed Summer peak kW	North	Total Gross Demand Reduction (kW)	0.6	0.0	0.0	0.6
	North	Net Adjusted Demand Reduction (kW)	0.5	0.0	0.0	0.5
Installed Winter peak kW	North	Total Gross Demand Reduction (kW)	-	-	-	0.0
	North	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	South	Total Participants	1	1	0	2
Installed kWh/year	South	Total Gross Energy Savings (kWh/yr)	16,520	6	0	16,526
	South	Net Adjusted Savings (kWh/yr)	13,216	5	0	13,221
Installed Summer peak kW	South	Total Gross Demand Reduction (kW)	4.0	0.0	0.0	4.0
	South	Net Adjusted Demand Reduction (kW)	3.2	0.0	0.0	3.2
Installed Winter peak kW	South	Total Gross Demand Reduction (kW)	-	0.0	-	0.0
	South	Net Adjusted Demand Reduction (kW)	-	0.0	-	0.0
	West	Total Participants	0	0	0	0
Installed kWh/year	West	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	West	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	West	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	West	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	West	Total Gross Demand Reduction (kW)	-	-	-	0.0
	West	Net Adjusted Demand Reduction (kW)	-	-	-	0.0

P.16.4 2020–2022 North Carolina Non-Residential Window Film (DSM Phase VII)
Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CSW2	Not available	6,974	13	52835%	Not Available	Not Available
CSW2	Schedule 5	6,974	13	52835%	33,652	21%



P.17 North Carolina Non-Residential New Construction Program 2020-2022

P.17.1 2020-2022 North Carolina Non-Residential New Construction Program Annual Indicator Table

NC - Non-Residential New Construction Program			2020	2021	2022	2020-2022
Category	measur	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$0	\$1,270	\$1,293	\$2,563
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$27,089	\$30,963	\$58,052
Costs (\$)		Planned	\$0	\$70,887	\$73,614	\$144,501
Costs (\$)		Variance	\$0	-\$43,798	-\$42,651	-\$86,449
		Annual % of Planned	N/A	38%	42%	40%
Participants ¹		Total (Gross)	0	0	0	0
		Planned	0	1	3	4
		Variance	0	-1	-3	-4
		Annual % of Planned (Gross)	N/A	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0
		Planned Net Savings (kWh/yr)	0	48,833	146,499	195,332
		Annual % Toward Planned Net Savings	N/A	0%	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	13.0	39.1	52.2
		Annual % Toward Planned Net Reduction	N/A	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	0.0
		Realization Rate Weighted by Measure	-	-	-	N/A
		Realization Rate Adjustment (kW)	-	-	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	-	N/A
		Net-To-Gross Adjustment (kW)	-	-	-	0.0
		Net Adjusted Demand Reduction (kW)	-	-	-	0.0
		Planned Net Savings (kW)	0.0	14.7	44.2	59.0
		Annual % Toward Planned Net Reduction	-	-	-	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-
Measures						
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	N/A	4.6%	4.3%	4.3%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A



P.17.2 2022 North Carolina Non-Residential New Construction Program Monthly Indicator Table

Category	Measure	Indicator	2022												2020-2022 Total	
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
O&M (\$)	Direct Rebate		\$113	\$121	\$111	\$105	\$105	\$106	\$101	\$110	\$106	\$107	\$101	\$101	\$1,293	\$2,563
O&M (\$)	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	Direct EM&V		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	Indirect Other (Administrative)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital (\$)	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total		\$2,712	\$2,906	\$2,651	\$2,518	\$2,514	\$2,532	\$2,411	\$2,627	\$2,543	\$2,570	\$2,429	\$2,429	\$30,963	\$68,052
Costs (\$)	Planned		\$6,135	\$6,135	\$6,135	\$6,135	\$6,135	\$6,135	\$6,135	\$6,135	\$6,135	\$6,135	\$6,135	\$6,135	\$73,614	\$144,501
Costs (\$)	Variance		-\$3,423	-\$3,229	-\$3,483	-\$3,616	-\$3,621	-\$3,603	-\$3,724	-\$3,508	-\$3,594	-\$3,565	-\$3,705	-\$3,705	-\$42,651	-\$86,449
	Annual % of Planned		3.7%	7.6%	11.2%	14.7%	18.1%	21.5%	24.8%	28.4%	31.8%	35.3%	38.8%	42.1%	42%	40%
Participants*	Total (Gross)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Planned		3	0	0	0	0	0	0	0	0	0	0	0	0	3
	Variance		-3	0	0	0	0	0	0	0	0	0	0	0	-3	-4
	Annual % of Planned (Gross)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Installed kWh/year	Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Gross Energy Savings (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Realization Rate Weighted by Measure (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net-To-Gross Rate Weighted by Measure		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Net-To-Gross Adjustment (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net Adjusted Savings (kWh/yr)		146,489	0	0	0	0	0	0	0	0	0	0	0	146,489	195,332
	Annual % Toward Planned Net Savings		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Planned Net Savings (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total Gross Demand Reduction (kW)		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Realization Rate Weighted by Measure		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Net-To-Gross Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Net-To-Gross Adjustment (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Net Adjusted Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Planned Net Savings (kW)		39.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.1	52.2
	Annual % Toward Planned Net Reduction		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Gross Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Realization Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Realization Rate Adjusted (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Realization Rate Adjusted Gross Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Net-To-Gross Rate Weighted by Measure		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Net-To-Gross Adjustment (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Net Adjusted Demand Reduction (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Planned Net Savings (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Annual % Toward Planned Net Reduction		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Avg. Gross Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Avg. Net Demand Reduction Per Participant (kW)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Performance	Cum. \$Admin. per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cum. \$Admin. per kWh/Year (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cum. \$Admin. per kW (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cum. \$EM&V per \$T total		4.2%	4.4%	4.7%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.3%	4.3%
	Cum. \$Rebate per Participant (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



P.18 North Carolina Non-Residential Small Business Improvement Enhanced Program 2020-2022

P.18.1 2020-2022 North Carolina Non-Residential Small Business Improvement Enhanced Program Annual Indicator Tables

NC - Non-Residential Small Business Improvement Enhanced Program			2020	2021	2022	2020-2022
Category	Measure	Indicator	Total	Total	Total	Total
O&M (\$)		Direct Rebate				
O&M (\$)		Direct Implementation				
O&M (\$)		Direct EM&V				
O&M (\$)		Indirect Other (Administrative)	\$0	\$3,866	\$6,068	\$9,933
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$82,440	\$145,320	\$227,760
Costs (\$)		Planned	\$0	\$221,797	\$233,024	\$454,821
Costs (\$)		Variance	\$0	-\$139,357	-\$87,704	-\$227,061
		Annual % of Planned	N/A	37%	62%	50%
Participants ¹		Total (Gross)	0	8	8	16
		Planned	0	41	41	82
		Variance	0	-33	-33	-66
		Annual % of Planned (Gross)	N/A	20%	20%	20%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	157,603	315,960	473,563
		Realization Rate Weighted by Measure	N/A	120%	120%	120%
		Realization Rate Adjustment (kWh/yr)	0	31,908	64,325	96,232
		Realization Rate Adjusted Savings (kWh/yr)	0	189,510	380,285	569,795
		Net-To-Gross Rate Weighted by Measure	N/A	73%	73%	73%
		Net-To-Gross Adjustment (kWh/yr)	0	-51,874	-104,453	-156,327
		Net Adjusted Savings (kWh/yr)	0	137,636	275,832	413,468
		Planned Net Savings (kWh/yr)	0	594,904	594,904	1,189,809
		Annual % Toward Planned Net Savings	N/A	23.1%	46.4%	34.8%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	19,700	39,495	29,598
		Avg. Net Savings Per Participant (kWh/yr)	N/A	17,205	34,479	25,842
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	30.3	66.8	97.0
		Realization Rate Weighted by Measure	N/A	100%	100%	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	30.3	66.8	97.0
		Net-To-Gross Rate Weighted by Measure	N/A	73%	73%	73%
		Net-To-Gross Adjustment (kW)	0.0	-8.3	-17.9	-26.1
		Net Adjusted Demand Reduction (kW)	0.0	22.0	48.9	70.9
		Planned Net Savings (kW)	0.0	187.2	187.2	374.4
		Annual % Toward Planned Net Reduction	N/A	11.7%	26.1%	18.9%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	3.8	8.3	6.1
		Avg. Net Demand Reduction Per Participant (kW)	N/A	2.7	6.1	4.4
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	15.5	28.0	43.5
		Realization Rate Weighted by Measure	-	100%	100%	100%
		Realization Rate Adjustment (kW)	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	15.5	28.0	43.5
		Net-To-Gross Rate Weighted by Measure	-	73%	73%	73%
		Net-To-Gross Adjustment (kW)	-	-4.1	-7.6	-11.7
		Net Adjusted Demand Reduction (kW)	-	11.4	20.4	31.8
		Planned Net Savings (kW)	0.0	120.5	120.5	241.0
		Annual % Toward Planned Net Reduction	-	9.48%	16.9%	13.2%
		Avg. Gross Demand Reduction Per Participant (kW)	-	1.9	3.5	2.7
		Avg. Net Demand Reduction Per Participant (kW)	-	1.4	2.6	2.0
Measures						
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$483	\$621	\$621
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.02	\$0.02	\$0.02
		Cum. \$Admin. per kW (Gross)	N/A	\$128	\$102	\$102
		Cum. \$EM&V per \$Total	N/A	2.7%	5.7%	5.7%
		Cum. \$Rebate per Participant (Gross)	N/A	\$2,911	\$5,072	\$5,072



P.18.2 2022 North Carolina Non-Residential Small Business Improvement Enhanced Program Monthly Indicator Tables

Category	Measure	Indicator	2022												2022 Total
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
O&M (\$)	Direct Rebate		\$658	\$283	\$505	\$102	\$399	\$298	\$537	\$1,049	\$288	\$342	\$493	\$5,068	\$9,933
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct EM&V		\$15,759	\$6,779	\$12,095	\$21,565	\$9,306	\$7,144	\$12,652	\$25,135	\$6,692	\$8,194	\$7,751	\$11,817	\$145,320
	O&M (\$)		\$19,419	\$19,419	\$19,419	\$19,419	\$19,419	\$19,419	\$19,419	\$19,419	\$19,419	\$19,419	\$19,419	\$19,419	\$233,024
	O&M (\$)		\$3,659	\$12,640	\$7,323	\$2,176	\$10,113	\$12,275	\$6,567	\$5,717	\$12,627	\$11,224	\$11,667	\$19,601	\$464,821
	Capital (\$)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Costs (\$)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Costs (\$)		6.8%	9.7%	14.9%	24.1%	28.1%	31.2%	36.7%	47.5%	50.4%	54.0%	57.3%	62.4%	62%
	Annual % of Planned														
	Participants*														
	Total (Gross)		2	0	0	1	1	1	1	2	0	0	0	1	6
	Planned		8	3	3	3	3	3	3	3	3	3	3	41	
	Variance		-6	-3	-3	-2	-2	-2	-1	-1	-3	-3	-2	-33	
	Annual % of Planned (Gross)		5%	5%	5%	7%	10%	10%	12%	17%	17%	17%	20%	20%	
Installed kWh/year	Total		3,455	0	29,479	100,804	15,878	0	40,545	110,388	0	0	15,411	315,960	
	Realization Rate		100%	N/A	121%	114%	N/A	121%	N/A	120%	N/A	N/A	120%	120%	
	Realization Rate Adjusted		0	0	6,191	21,169	2,291	0	8,514	23,024	0	0	3,135	64,325	
	Realization Rate Adjusted Savings (kWh/yr)		3,455	0	35,670	121,973	18,169	0	49,059	133,412	0	0	18,547	380,285	
	Net-To-Gross Rate Weighted by Measure		93%	N/A	72%	72%	79%	N/A	72%	72%	N/A	N/A	73%	73%	
	Net-To-Gross Rate Weighted by Measure		-242	0	-9,988	-34,150	-4,044	0	-13,737	-37,198	0	0	-5,032	-104,453	
	Net Adjusted Savings (kWh/yr)		3,213	0	25,682	87,920	14,125	0	35,323	96,214	0	0	13,455	276,832	
	Planned Net Savings (kWh/yr)		116,079	43,530	43,530	43,530	43,530	43,530	43,530	43,530	43,530	43,530	43,530	594,904	
	Annual % Toward Planned Net Savings		0.54%	0.54%	4.86%	19.9%	22.0%	22.0%	27.9%	44.1%	44.1%	44.1%	44.1%	46.4%	
	Avg. Net Savings Per Participant (kWh/yr)		1,727	N/A	N/A	100,804	15,878	N/A	40,545	55,194	N/A	N/A	15,411	39,495	
Avg. Net Savings Per Participant (kWh/yr)		1,606	N/A	N/A	87,920	14,125	N/A	35,323	48,107	N/A	N/A	13,455	34,479		
Installed Summer peak kW	Total		3.2	0.0	6.1	23.3	2.5	0.0	1.2	27.2	0.0	0.0	3.2	66.8	
	Realization Rate		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		3.2	0.0	6.1	23.3	2.5	0.0	1.2	27.2	0.0	0.0	3.2	66.8	
	Net-To-Gross Rate Weighted by Measure		93%	100%	72%	72%	76%	100%	72%	72%	100%	100%	72%	73%	
	Net-To-Gross Rate Weighted by Measure		-0.2	0.0	-1.7	-6.5	-0.6	0.0	-0.3	-7.6	0.0	0.0	-0.9	-17.9	
	Net Adjusted Demand Reduction (kW)		3.0	0.0	4.4	16.8	1.9	0.0	0.9	19.6	0.0	0.0	2.3	46.9	
	Planned Net Savings (kW)		36.5	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	187.2	
	Annual % Toward Planned Net Reduction		1.60%	1.60%	3.94%	12.9%	13.9%	14.4%	24.9%	24.9%	24.9%	24.9%	26.1%	16.9%	
	Avg. Net Demand Reduction Per Participant (kW)		1.6	N/A	N/A	23.3	2.5	N/A	1.2	13.6	N/A	N/A	3.2	8.3	
Avg. Net Demand Reduction Per Participant (kW)		1.5	N/A	N/A	16.8	1.9	N/A	0.9	9.8	N/A	N/A	2.3	6.1		
Installed Winter peak kW	Total		1.0	0.0	2.8	6.8	1.3	0.0	5.6	9.1	0.0	0.0	1.5	28.0	
	Realization Rate		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)		1.0	0.0	2.8	6.8	1.3	0.0	5.6	9.1	0.0	0.0	1.5	28.0	
	Net-To-Gross Rate Weighted by Measure		93%	100%	72%	72%	76%	100%	72%	72%	100%	100%	72%	73%	
	Net-To-Gross Rate Weighted by Measure		-0.1	0.0	-0.8	-1.9	-0.3	0.0	-1.6	-2.5	0.0	0.0	-0.4	-7.6	
	Net Adjusted Demand Reduction (kW)		0.9	0.0	2.0	4.9	1.0	0.0	4.1	6.5	0.0	0.0	1.1	20.4	
	Planned Net Savings (kW)		23.5	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	120.5	
	Annual % Toward Planned Net Reduction		0.74%	0.74%	2.39%	6.44%	7.25%	10.6%	16.0%	16.0%	16.0%	16.0%	16.9%	13.2%	
	Avg. Net Demand Reduction Per Participant (kW)		0.5	N/A	N/A	6.8	1.3	N/A	5.6	4.5	N/A	N/A	1.5	3.5	
Avg. Net Demand Reduction Per Participant (kW)		0.4	N/A	N/A	4.9	1.0	N/A	4.1	3.3	N/A	N/A	1.1	2.6		
Measures															
Program Performance	Cum. \$Admin. per Participant (Gross)		\$452	\$481	\$531	\$565	\$550	\$575	\$572	\$566	\$595	\$608	\$621	\$621	
	Cum. \$Admin. per kWh/year (Gross)		\$0.03	\$0.03	\$0.03	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	
	Cum. \$Admin. per kW (Gross)		\$155	\$144	\$154	\$99	\$101	\$105	\$112	\$90	\$93	\$97	\$102	\$102	
	Cum. \$EM&V per \$Total		2.2%	2.5%	3.1%	3.1%	3.6%	4.2%	3.8%	4.5%	4.6%	5.4%	6.0%	5.7%	
	Cum. \$Rebate per Participant (Gross)		\$3,273	\$3,273	\$3,736	\$4,680	\$4,455	\$4,455	\$4,455	\$4,611	\$5,045	\$5,045	\$5,072	\$5,072	



P.18.3 2021-2022 North Carolina Non-Residential Small Business Improvement Program Measure Indicator Tables

NC - Non-Residential Small Business Improvement Program			2020	2021	2022	2016-2022
Measures						
	T8/T5 Lamps	Total Participants	0	0	0	0
Installed kWh/year	T8/T5 Lamps	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	T8/T5 Lamps	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	T8/T5 Lamps	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	T8/T5 Lamps	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	T8/T5 Lamps	Total Gross Demand Reduction (kW)	-	-	-	0.0
	T8/T5 Lamps	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Variable Frequency Drives (VFD)	Total Participants	0	0	0	0
Installed kWh/year	Variable Frequency Drives (VFD)	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Variable Frequency Drives (VFD)	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Variable Frequency Drives (VFD)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Variable Frequency Drives (VFD)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Variable Frequency Drives (VFD)	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Variable Frequency Drives (VFD)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0



NC - Non-Residential Small Business Improvement Program			2020	2021	2022	2016-2022
Measures						
	Occupancy Sensors	Total Participants	0	0	0	0
Installed kWh/year	Occupancy Sensors	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Occupancy Sensors	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Occupancy Sensors	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Occupancy Sensors	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Occupancy Sensors	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Occupancy Sensors	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Programmable Thermostats	Total Participants	0	0	0	0
Installed kWh/year	Programmable Thermostats	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Programmable Thermostats	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Programmable Thermostats	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Programmable Thermostats	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Programmable Thermostats	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Programmable Thermostats	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Refrigerant Charge Adjustment (AC-HP)	Total Participants	0	0	0	0
Installed kWh/year	Refrigerant Charge Adjustment (AC-HP)	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Refrigerant Charge Adjustment (AC-HP)	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Refrigerant Charge Adjustment (AC-HP)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Refrigerant Charge Adjustment (AC-HP)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Refrigerant Charge Adjustment (AC-HP)	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Refrigerant Charge Adjustment (AC-HP)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Strip Curtain	Total Participants	0	0	0	0
Installed kWh/year	Strip Curtain	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Strip Curtain	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Strip Curtain	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Strip Curtain	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Strip Curtain	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Strip Curtain	Net Adjusted Demand Reduction (kW)	-	-	-	0.0



NC - Non-Residential Small Business Improvement Program			2020	2021	2022	2016-2022
Measures						
	Economizers	Total Participants	0	0	0	0
Installed kWh/year	Economizers	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Economizers	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Economizers	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Economizers	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Economizers	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Economizers	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Heat Pump Upgrade	Total Participants	0	0	0	0
Installed kWh/year	Heat Pump Upgrade	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Heat Pump Upgrade	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Heat Pump Upgrade	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Heat Pump Upgrade	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	LED Lamps	Total Participants	16	7	0	92
Installed kWh/year	LED Lamps	Total Gross Energy Savings (kWh/yr)	379,036	203,164	0	2,434,409
	LED Lamps	Net Adjusted Savings (kWh/yr)	352,504	188,942	0	2,264,000
Installed Summer peak kW	LED Lamps	Total Gross Demand Reduction (kW)	49.4	23.7	0.0	459.3
	LED Lamps	Net Adjusted Demand Reduction (kW)	45.9	22.0	0.0	427.2
Installed Winter peak kW	LED Lamps	Total Gross Demand Reduction (kW)	-	25.6	-	25.6
	LED Lamps	Net Adjusted Demand Reduction (kW)	-	23.8	-	23.8
	Night Cover	Total Participants	0	0	0	0
Installed kWh/year	Night Cover	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Night Cover	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Night Cover	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Night Cover	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Night Cover	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Night Cover	Net Adjusted Demand Reduction (kW)	-	-	-	0.0



NC - Non-Residential Small Business Improvement Program			2020	2021	2022	2016-2022
Measures						
	AC Tune-Ups	Total Participants	0	0	0	7
Installed kWh/year	AC Tune-Ups	Total Gross Energy Savings (kWh/yr)	0	0	0	4,202
	AC Tune-Ups	Net Adjusted Savings (kWh/yr)	0	0	0	3,908
Installed Summer peak kW	AC Tune-Ups	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	2.8
	AC Tune-Ups	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	2.6
Installed Winter peak kW	AC Tune-Ups	Total Gross Demand Reduction (kW)	-	-	-	0.0
	AC Tune-Ups	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Door Closer	Total Participants	0	0	0	0
Installed kWh/year	Door Closer	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Door Closer	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Door Closer	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Door Closer	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Door Closer	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Door Closer	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Door Gasket	Total Participants	0	0	0	0
Installed kWh/year	Door Gasket	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Door Gasket	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Door Gasket	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Door Gasket	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Door Gasket	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Door Gasket	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Duct Test and Seal	Total Participants	1	4	0	8
Installed kWh/year	Duct Test and Seal	Total Gross Energy Savings (kWh/yr)	1,279	3,350	0	10,962
	Duct Test and Seal	Net Adjusted Savings (kWh/yr)	1,190	3,116	0	10,195
Installed Summer peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	1.1	1.3	0.0	5.3
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	1.0	1.2	0.0	5.0
Installed Winter peak kW	Duct Test and Seal	Total Gross Demand Reduction (kW)	-	4.0	-	4.0
	Duct Test and Seal	Net Adjusted Demand Reduction (kW)	-	3.7	-	3.7



P.18.4 2021-2022 North Carolina Non-Residential Small Business Improvement Program Comparison of Savings to Usage by Rate Schedule

Program_Acronym	Rate_Schedule	AverageNetImpactPerPart	Net Systemwide Planned		Net Adjusted Savings as Percent of		Average Annual Usage		Net Adjusted Savings as Percent of Average Annual Usage
			Savings (kWh/year)	12,421	Planned Savings	(kWh/year)	Average Annual Usage		
SBIP	Not available	24,235	12,421	195%	Not Available	33,652	Not Available	71%	
SBIP	Schedule 5	23,728	12,421	191%	120,844			59%	
SBIP	Schedule 5P	71,434	12,421	575%					



P.19 North Carolina Non-Residential Office Program 2019–2022

P.19.1 2019–2022 North Carolina Non-Residential Office Program Annual Indicator Tables

NC - Non-Residential Office Program			2019	2020	2021	2022	2019-2022
Category	Measure	Indicator	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate					
O&M (\$)		Direct Implementation					
O&M (\$)		Direct EM&V					
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$1,783	\$775	\$2,558
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$21,142	\$38,028	\$18,553	\$77,723
Costs (\$)		Planned	\$0	\$72,457	\$71,023	\$74,366	\$217,846
Costs (\$)		Variance	\$0	-\$51,316	-\$32,995	-\$55,812	-\$140,123
		Annual % of Planned	N/A	29%	54%	25%	36%
Participants ¹		Total (Gross)	0	0	2	0	2
		Planned	0	5	5	5	15
		Variance	0	-5	-3	-5	-13
		Annual % of Planned (Gross)	N/A	0%	40%	0%	13%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	43,444	0	43,444
		Realization Rate Weighted by Measure	N/A	N/A	100%	N/A	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	43,444	0	43,444
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	90%	N/A	90%
		Net-To-Gross Adjustment (kWh/yr)	0	0	-4,344	0	-4,344
		Net Adjusted Savings (kWh/yr)	0	0	39,100	0	39,100
		Planned Net Savings (kWh/yr)	0	292,969	292,969	292,969	878,907
		Annual % Toward Planned Net Savings	N/A	0%	13.3%	0%	4.45%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	21,722	N/A	21,722
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	19,550	N/A	19,550
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	29.6	29.6	29.6	88.7
		Annual % Toward Planned Net Reduction	N/A	0%	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	0.0	N/A	0.0
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	0.0	N/A	0.0
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
		Realization Rate Weighted by Measure	-	-	N/A	N/A	N/A
		Realization Rate Adjustment (kW)	-	-	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	-	-	N/A	N/A	N/A
		Net-To-Gross Adjustment (kW)	-	-	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	-	-	0.0	0.0	0.0
		Planned Net Savings (kW)	0.0	0.0	155.5	155.5	311.1
		Annual % Toward Planned Net Reduction	-	-	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	0.0	N/A	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	0.0	N/A	-
Measures							
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	\$892	\$1,279	\$1,279
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	\$0.04	\$0.06	\$0.06
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	N/A	39.8%	29.2%	31.5%	31.5%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	\$4,079	\$4,079	\$4,079



P.19.2 2022 North Carolina Non-Residential Office Program Monthly Indicator Tables

Category	Measure	Indicator	2022												2022 Total	2021 Total
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
O&M (\$)	Direct Rebate		\$42	\$65	\$54	\$51	\$92	\$75	\$37	\$17	\$54	\$77	\$70	\$41	\$775	\$2,556
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Direct EM&V		\$1,002	\$1,558	\$1,304	\$1,221	\$2,205	\$1,784	\$891	\$2,797	\$1,298	\$1,842	\$1,674	\$976	\$16,553	\$77,723
	Indirect Other (Administrative)		\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$61,970
Capitol (\$)	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total		\$1,002	\$1,558	\$1,304	\$1,221	\$2,205	\$1,784	\$891	\$2,797	\$1,298	\$1,842	\$1,674	\$976	\$16,553	\$77,723
Costs (\$)	Planned		\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$6,197	\$61,970
	Variance		-\$5,195	-\$4,639	-\$4,894	-\$4,976	-\$3,992	-\$4,413	-\$5,306	-\$4,400	-\$4,899	-\$4,355	-\$4,523	-\$5,221	-\$55,812	-\$217,846
Participants ¹	Annual % of Planned		1.3%	3.4%	5.2%	6.8%	9.8%	12.2%	13.4%	17.2%	18.9%	21.4%	23.6%	24.9%	25%	36%
	Total (Gross)		0	0	0	0	0	0	0	0	0	0	0	0	0	2
Installed kWh/year	Planned		5	0	0	0	0	0	0	0	0	0	0	0	5	15
	Variance		-5	0	0	0	0	0	0	0	0	0	0	0	-5	-13
Total	Annual % of Planned (Gross)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	13%
	Total Gross Energy Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	43,444
Realization Rate Weighted by Measure	Realization Rate (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%
	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net-T0-Gross Rate Weighted by Measure	Realization Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	43,444
	Net-T0-Gross Rate Adjusted Savings (kWh/yr)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planned Net Savings (kWh/yr)	Planned Net Savings (kWh/yr)		292,969	0	0	0	0	0	0	0	0	0	0	0	0	39,100
	Annual % Toward Planned Net Savings		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.45%
Avg. Net Savings Per Participant (kWh/yr)	Avg. Gross Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21,722
	Avg. Net Savings Per Participant (kWh/yr)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19,550
Installed Summer peak kW	Total Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
Realization Rate Adjusted Gross Demand Reduction (kW)	Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net-T0-Gross Rate Weighted by Measure	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Net-T0-Gross Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Planned Net Savings (kW)	Planned Net Savings (kW)		29.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.7
	Annual % Toward Planned Net Reduction		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Avg. Gross Demand Reduction Per Participant (kW)	Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0
	Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0
Installed Winter peak kW	Total Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Weighted by Measure		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
Realization Rate Adjusted Gross Demand Reduction (kW)	Realization Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net-T0-Gross Rate Weighted by Measure	Realization Rate Adjusted Gross Demand Reduction (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Net-T0-Gross Rate Adjusted (kW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Planned Net Savings (kW)	Planned Net Savings (kW)		155.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	311.1
	Annual % Toward Planned Net Reduction		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Avg. Gross Demand Reduction Per Participant (kW)	Avg. Gross Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-
	Avg. Net Demand Reduction Per Participant (kW)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-
Program Performance	Cum. \$Admin. per Participant (Gross)		\$912	\$945	\$972	\$998	\$1,044	\$1,081	\$1,100	\$1,168	\$1,185	\$1,224	\$1,258	\$1,279	\$1,279	\$1,279
	Cum. \$Admin. per kWh/year (Gross)		\$0.04	\$0.04	\$0.04	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06
	Cum. \$Admin. per kW (Gross)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cum. \$EM&V per \$1 total		28.7%	28.9%	28.9%	28.8%	29.8%	30.3%	29.9%	31.2%	31.2%	31.6%	31.9%	31.5%	31.5%	31.5%
Cum. \$rebate per Participant (Gross)		\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	\$4,079	



P.19.3 2020–2022 North Carolina Non-Residential Office Program Measure
Indicator Tables

NC - Non-Residential Office Program			2020	2021	2022	2019-2022
Measures						
	Schedule HVAC (electric heat)	Total Participants	0	0	0	0
Installed kWh/year	Schedule HVAC (electric heat)	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Schedule HVAC (electric heat)	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Schedule HVAC (electric heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Schedule HVAC (electric heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Schedule HVAC (electric heat)	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Schedule HVAC (electric heat)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Schedule HVAC (gas heat)	Total Participants	0	2	0	2
Installed kWh/year	Schedule HVAC (gas heat)	Total Gross Energy Savings (kWh/yr)	0	12,466	0	12,466
	Schedule HVAC (gas heat)	Net Adjusted Savings (kWh/yr)	0	11,220	0	11,220
Installed Summer peak kW	Schedule HVAC (gas heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Schedule HVAC (gas heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Schedule HVAC (gas heat)	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Schedule HVAC (gas heat)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Schedule Lighting	Total Participants	0	0	0	0
Installed kWh/year	Schedule Lighting	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Schedule Lighting	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Schedule Lighting	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Schedule Lighting	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Schedule Lighting	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Schedule Lighting	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Static Pressure Reset	Total Participants	0	0	0	0
Installed kWh/year	Static Pressure Reset	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Static Pressure Reset	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Static Pressure Reset	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Static Pressure Reset	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Static Pressure Reset	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Static Pressure Reset	Net Adjusted Demand Reduction (kW)	-	-	-	0.0



NC - Non-Residential Office Program			2020	2021	2022	2019-2022
Measures						
	Discharge Air Temperature Reset (electric heat)	Total Participants	0	0	0	0
Installed kWh/year	Discharge Air Temperature Reset (electric heat)	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Discharge Air Temperature Reset (electric heat)	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Discharge Air Temperature Reset (electric heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Discharge Air Temperature Reset (electric heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Discharge Air Temperature Reset (electric heat)	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Discharge Air Temperature Reset (electric heat)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Dual Enthalpy Economizer Control	Total Participants	0	0	0	0
Installed kWh/year	Dual Enthalpy Economizer Control	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Dual Enthalpy Economizer Control	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Dual Enthalpy Economizer Control	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Dual Enthalpy Economizer Control	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Dual Enthalpy Economizer Control	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Dual Enthalpy Economizer Control	Net Adjusted Demand Reduction (kW)	-	-	-	0.0
	Night Temperature Setback	Total Participants	0	2	0	2
Installed kWh/year	Night Temperature Setback	Total Gross Energy Savings (kWh/yr)	0	30,978	0	30,978
	Night Temperature Setback	Net Adjusted Savings (kWh/yr)	0	27,880	0	27,880
Installed Summer peak kW	Night Temperature Setback	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Night Temperature Setback	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Night Temperature Setback	Total Gross Demand Reduction (kW)	-	0.0	0.0	0.0
	Night Temperature Setback	Net Adjusted Demand Reduction (kW)	-	0.0	0.0	0.0
	Reduce VAV Box Minimum Position (electric heat)	Total Participants	0	0	0	0
Installed kWh/year	Reduce VAV Box Minimum Position (electric heat)	Total Gross Energy Savings (kWh/yr)	0	0	0	0
	Reduce VAV Box Minimum Position (electric heat)	Net Adjusted Savings (kWh/yr)	0	0	0	0
Installed Summer peak kW	Reduce VAV Box Minimum Position (electric heat)	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0
	Reduce VAV Box Minimum Position (electric heat)	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0
Installed Winter peak kW	Reduce VAV Box Minimum Position (electric heat)	Total Gross Demand Reduction (kW)	-	-	-	0.0
	Reduce VAV Box Minimum Position (electric heat)	Net Adjusted Demand Reduction (kW)	-	-	-	0.0



P.19.4 2020–2022 North Carolina Non-Residential Office Program Comparison of Savings to Usage by Rate Schedule

Program Acronym	Rate Schedule	Average Net Impact Per Part	Net Systemwide Planned Savings (kWh/year)	Net Adjusted Savings as Percent of Planned Savings	Average Annual Usage (kWh/year)	Net Adjusted Savings as Percent of Average Annual Usage
CTSO	Not available	19,550	58,594	33%	Not Available	Not Available
CTSO	Schedule 5P	19,550	58,594	33%	120,844	16%

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P.20 North Carolina Non-Residential Building Optimization Program 2022

P.20.1 2022 North Carolina Non-Residential Building Optimization Program Monthly Indicator Tables

NC - Non-Residential Building Optimization Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
O&M (\$)		Direct Rebate													
O&M (\$)		Direct Implementation													
O&M (\$)		Direct EM&V													
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$61	\$81	\$92	\$105	\$63	\$402
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$1,472	\$1,941	\$2,203	\$2,513	\$1,509	\$9,639	\$28,217
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$5,643	\$5,643	\$5,643	\$5,643	\$5,643	\$5,643	\$28,217
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	-\$4,171	-\$3,702	-\$3,440	-\$3,130	-\$4,134	-\$4,134	-\$18,577
		Annual % of Planned	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	12.1%	19.9%	28.8%	34.2%	34%	
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned	2	0	0	0	0	0	0	0	0	0	0	0	2
		Variance	-2	0	0	0	0	0	0	0	0	0	0	0	-2
		Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned Net Savings (kWh/yr)	329,193	0	0	0	0	0	0	0	0	0	0	0	329,193
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	33.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.2
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Planned Net Savings (kW)	174.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	174.8
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-



P.21 North Carolina Non-Residential Building Automation Program 2022

P.21.1 2022 North Carolina Non-Residential Building Automation Program Monthly Indicator Tables

NC - Non-Residential Building Automation System Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
O&M (\$)		Direct Rebate													
O&M (\$)		Direct Implementation													
O&M (\$)		Direct EM&V													
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75	\$78	\$79	\$81	\$76	\$388
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$0	\$1,784	\$1,871	\$1,888	\$1,937	\$1,821		\$9,301
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$0	\$4,927	\$4,927	\$4,927	\$4,927	\$4,927		\$24,635
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	\$0	-\$3,143	-\$3,056	-\$3,039	-\$2,990	-\$3,106		-\$15,334
		Annual % of Planned	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.2%	14.8%	22.5%	30.4%	37.8%		38%
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned	2	0	0	0	0	0	0	0	0	0	0	0	2
		Variance	-2	0	0	0	0	0	0	0	0	0	0	0	-2
		Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned Net Savings (kWh/yr)	269,998	0	0	0	0	0	0	0	0	0	0	0	269,998
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	27.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.2
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0%	2.4%	4.2%	5.7%	4.5%	4.5%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



P.22 North Carolina Non-Residential Customer Engagement Program 2022

P.22.1 2022 North Carolina Non-Residential Customer Engagement Program Monthly Indicator Tables

NC - Non-Residential Engagement Program			2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022
Category	Measure	Indicator	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
O&M (\$)		Direct Rebate													
O&M (\$)		Direct Implementation													
O&M (\$)		Direct EM&V													
O&M (\$)		Indirect Other (Administrative)	\$0	\$0	\$0	\$0	\$0	\$12	\$2	\$95	\$98	\$101	\$108	\$211	\$627
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$0	\$0	\$0	\$0	\$280	\$47	\$2,286	\$2,359	\$2,407	\$2,593	\$5,051	\$15,022
Costs (\$)		Planned	\$0	\$0	\$0	\$0	\$0	\$7,960	\$7,960	\$7,960	\$7,960	\$7,960	\$7,960	\$7,960	\$55,717
Costs (\$)		Variance	\$0	\$0	\$0	\$0	\$0	-\$7,680	-\$7,913	-\$5,673	-\$5,601	-\$5,552	-\$5,367	-\$2,909	-\$40,695
		Annual % of Planned	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.6%	4.7%	8.9%	13.2%	17.9%	27.0%	27%
Participants ¹		Total (Gross)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned	3	0	0	0	0	0	0	0	0	0	0	0	3
		Variance	-3	0	0	0	0	0	0	0	0	0	0	0	-3
		Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net-To-Gross Rate Weighted by Measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0
		Planned Net Savings (kWh/yr)	220,865	0	0	0	0	0	0	0	0	0	0	0	220,865
		Annual % Toward Planned Net Savings	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Planned Net Savings (kW)	22.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.3
		Annual % Toward Planned Net Reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Planned Net Savings (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cum. \$EM&V per \$Total	N/A	N/A	N/A	N/A	N/A	0.0%	0.0%	0.0%	3.2%	4.0%	6.6%	4.4%	4.4%
		Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



P.23 North Carolina Residential Smart Cooling Rewards Program 2011–2022
P.23.1 2011–2022 North Carolina Residential Smart Cooling Rewards Program Annual Indicator Tables

NC - Residential Smart Cooling Reward Program	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2011-2022
Category Measure	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
O&M (\$)													
Direct Rebate													
O&M (\$)													
Direct Implementation													
O&M (\$)													
Indirect Other (Administrative)													
Capital (\$)													
Direct Implementation													
Costs (\$)													
Total													
Costs (\$)													
Planned													
Costs (\$)													
Variance													
Annual % of Planned													
Participants ¹													
Total (Cumulative @ End of Month)													
Removals (Uninstalled) / Deactivations													
Opt-outs													
Adjusted Participants (Cum.)													
In Service Rate Adjustment (Cum.)													
Net Participation (Cum.)													
Planned (Cum.)													
Variance (Cum.)													
Cum % toward planned total (Net basis)													
Removal (Uninstalled) / Deactivation Rate													
Average % Opt-outs (rate)													
Connected Load kW													
Ex-Ante Estimated kW													
Connected Load Per Participant (kW)													
Summer Peak Shaving Potential kW - Gross Participants													
Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW													
Less Opt-outs (kW)													
Dispatchable Summer Peak Shaving Potential - Total kW													
In Service Rate Adjustment (Cum.)													
Realization Rate Weighted by Measure													
Adjustment for Realization Rate													
Net Summer Demand (Cum.)													
Planned Summer Demand (Cum.)													
Cum. % toward planned total (Net basis)													
Dispatchable Summer Peak Shaving Potential kW per Participant													
Cum. \$Admin. per Participant (Gross)													
Cum. \$Admin. per kW (Gross)													
Cum. \$EM&V per \$Total													
Cum. \$Rebate per Participant (Gross)													



P.23.2 2022 North Carolina Residential Smart Cooling Rewards Program Monthly Indicator Tables

Category	Measure	Indicator	2022	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2022	Total	2021-2022	Total	
O&M (\$)	Direct Rebate		\$356	\$431	\$351	\$383	\$466	\$1,762	\$1,051	\$1,336	\$1,312	\$216	\$330	\$319	\$8,312	\$155,748				
	Direct Implementation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75	\$862,499			
	Direct EM&V		\$8,521	\$10,317	\$8,400	\$9,176	\$11,171	\$42,270	\$25,161	\$31,999	\$31,425	\$5,167	\$7,896	\$7,643	\$199,147	\$3,787,247				
	Indirect Other (Administrative)		\$11,159	\$11,159	\$11,159	\$11,159	\$47,424	\$47,424	\$11,159	\$11,159	\$11,159	\$11,159	\$11,159	\$11,159	\$11,159	\$278,967	\$6,262,647			
	Capital (\$)		\$2,637	\$841	\$2,758	\$1,983	\$12	\$5,154	\$22,263	\$15,426	\$15,999	\$5,991	\$3,263	\$3,515	\$79,820	\$2,475,400				
	Costs (\$)		3.1%	6.8%	9.8%	13.1%	17.1%	32.2%	41.2%	52.7%	64.0%	65.8%	68.6%	71.4%	71%	60%				
	Costs (\$)		6.287	6.288	6.288	6.288	6.288	6.288	6.288	6.288	6.288	6.288	6.289	6.289	6.289	6.289	6.289	6.289		
	Participants ¹		3,818	3,826	3,839	3,853	3,865	3,888	3,905	3,914	3,920	3,944	3,955	3,965	3,965	3,965	3,965	3,965		
	Opt-outs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Adjusted Participants (Cum.)		2,469	2,462	2,449	2,435	2,423	2,400	2,383	2,374	2,369	2,345	2,334	2,324	2,324	2,324	2,324	2,324		
In Service Rate Adjustment (Cum.)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net Participation (Cum.)		2,469	2,462	2,449	2,435	2,423	2,400	2,383	2,374	2,369	2,345	2,334	2,324	2,324	2,324	2,324	2,324			
Planned (Cum.)		3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0	3,645.0			
Variance (Cum.)		-1,176.0	-1,183.0	-1,196.0	-1,210.0	-1,222.0	-1,245.0	-1,262.0	-1,271.0	-1,276.0	-1,300.0	-1,311.0	-1,321.0	-1,321.0	-1,321.0	-1,321.0	-1,321.0			
Cum % toward planned total (Net basis)		67.7%	67.5%	67.2%	66.8%	66.5%	65.8%	65.4%	65.1%	65.0%	64.3%	64.0%	63.8%	63.8%	63.8%	63.8%	63.8%			
Removal (Uninstalled) / Deactivation Rate		0.45%	0.32%	0.53%	0.57%	0.50%	0.96%	0.71%	0.38%	0.25%	1.02%	0.47%	0.43%	0.55%	0.90%	0.90%	0.90%			
Average % Opt-outs (rate)		0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%			
Connected Load kW		9,640	9,609	9,568	9,509	9,431	9,352	9,312	9,296	9,296	9,203	9,160	9,129	9,080	9,356.63	9,357				
Ex-Ante Estimated kW		0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49			
Connected Load Per Participant (kW)		3.90	3.90	3.90	3.91	3.89	3.90	3.91	3.92	3.92	3.88	3.91	3.91	3.91	4.03	4.03	4.03			
Summer Peak Shaving Potential kW - Gross Participants		3,106	3,107	3,107	3,107	3,107	3,107	3,107	3,107	3,107	3,107	3,107	3,107	3,107	3,107	3,107	3,107			
Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW		1,886	1,890	1,897	1,904	1,910	1,921	1,929	1,934	1,937	1,949	1,959	1,959	1,959	1,959	1,959	1,959			
Less Opt-outs (kW)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Dispatchable Summer Peak Shaving Potential - Total kW		1,220	1,216	1,210	1,203	1,197	1,186	1,177	1,173	1,173	1,170	1,158	1,148	1,148	1,148	1,148	1,148			
In Service Rate Adjustment (Cum.)		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			
Realization Rate Weighted by Measure		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Adjustment for Realization Rate		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Net Summer Demand (Cum.)		1,220	1,216	1,210	1,203	1,197	1,186	1,177	1,173	1,173	1,170	1,158	1,148	1,148	1,148	1,148	1,148			
Planned Summer Demand (Cum.)		1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8	1,942.8			
Cum. % toward planned total (Net basis)		62.78%	62.61%	62.28%	61.92%	61.61%	61.03%	60.60%	60.37%	60.24%	59.63%	59.35%	59.10%	59.10%	59.10%	59.10%	59.10%			
Dispatchable Summer Peak Shaving Potential kW per Participant		0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49			
Cum. \$Admin. per Participant (Gross)		\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24			
Cum. \$Admin. per kW (Gross)		\$48	\$48	\$48	\$48	\$48	\$48	\$48	\$48	\$48	\$48	\$48	\$48	\$48	\$48	\$48	\$48			
Cum. \$EM&V per \$Total		2.5%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%			
Cum. \$Rebate per Participant (Gross)		\$202	\$202	\$202	\$202	\$202	\$202	\$202	\$202	\$202	\$202	\$202	\$202	\$202	\$202	\$202	\$202			



P.24 North Carolina Residential Thermostat Rewards Program 2021-2022

P.24.1 2021–2022 North Carolina Residential Thermostat Rewards Program Annual Indicator Tables

NC - Residential Smart Thermostat Rewards Program			2021	2022	2021-2022
Category	Measure	Indicator	Total	Total	Total
O&M (\$)		Direct Rebate			
O&M (\$)		Direct Implementation			
O&M (\$)		Direct EM&V			
O&M (\$)		Indirect Other (Administrative)	\$860	\$1,864	\$2,724
Capital (\$)		Direct Implementation	\$0	\$0	\$0
Costs (\$)		Total	\$18,350	\$44,643	\$62,993
Costs (\$)		Planned	\$95,307	\$101,201	\$196,508
Costs (\$)		Variance	-\$76,957	-\$56,558	-\$133,515
		Annual % of Planned	19%	44%	32%
Participants ¹		Total (Cumulative @ End of Month)	86	243	243
		Removals (Uninstalled) / Deactivations	15	45	45
		Opt-outs	0	0	0
		Adjusted Participants (Cum.)	71	198	198
		Net Participation (Cum.)	71	198	198
		Planned (Cum.)	408.0	1,240.0	1,240.0
		Variance (Cum.)	-337.0	-1,042.0	-1,042.0
		Cum % toward planned total (Net basis)	17.4%	16.0%	16.0%
		Removal (Uninstalled) / Deactivation Rate	5.31%	1.99%	3.10%
		Average % Opt-outs (rate)	0.00%	0.00%	0.00%
		Ex-Ante Estimated kW	1.07	0.94	0.94
Summer kW Potential		Summer Peak Shaving Potential kW - Gross Participants	92	228	261
		Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW	16	42	42
		Dispatchable Summer Peak Shaving Potential - Total kW	76	186	219
		Realization Rate Weighted by Measure	100.0%	100.0%	100.0%
		Adjustment for Realization Rate	0	0	0
		Net Summer Demand (Cum.)	76	186	219
		Planned Summer Demand (Cum.)	649	1,972	1,972
		Cum. % toward planned total (Net basis)	11.66%	9.44%	11.11%
		Dispatchable Summer Peak Shaving Potential kW per Participant	1.07	0.94	0.94
Program Performance		Cum. \$Admin. per Participant (Gross)	\$10	\$11	\$11
		Cum. \$Admin. per kW (Gross)	\$9	\$12	\$10
		Cum. \$EM&V per \$Total	9.0%	19.5%	19.5%
		Cum. \$Rebate per Participant (Gross)	\$18	\$21	\$21



P.24.2 2022 North Carolina Residential Thermostat Rewards Program Monthly Indicator Tables

NC - Residential Smart Thermostat Rewards Program Category	Indicator Measure	2022												2021-2022 Total	
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		Total
O&M (\$)	Direct Rebate	\$88	\$11	\$165	\$139	\$150	\$148	\$87	\$172	\$113	\$121	\$120	\$450	\$1,864	\$2,724
O&M (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M (\$)	Direct O&M	\$2,104	\$2,658	\$3,955	\$3,325	\$3,598	\$3,536	\$2,075	\$4,125	\$2,700	\$2,908	\$2,883	\$10,776	\$44,643	\$62,993
O&M (\$)	Indirect Other (Administrative)	\$8,433	\$8,433	\$8,433	\$8,433	\$8,433	\$8,433	\$8,433	\$8,433	\$8,433	\$8,433	\$8,433	\$8,433	\$101,201	\$196,508
Capital (\$)	Direct Implementation	-\$6,330	-\$5,776	-\$4,479	-\$5,108	-\$4,835	-\$4,897	-\$6,358	-\$4,308	-\$5,733	-\$5,525	-\$5,550	-\$2,343	-\$56,558	-\$133,515
Costs (\$)	Planned	2.1%	4.7%	8.6%	11.9%	15.5%	18.9%	21.0%	25.1%	27.7%	30.6%	33.5%	44.1%	44%	32%
Costs (\$)	Variance														
Costs (\$)	Annual % of Planned														
Participants'	Total (Cumulative @ End of Month)	95	108	122	133	142	159	170	174	196	210	228	243	243	243
	Removals (Uninstalled) / Deactivations	16	17	18	22	26	32	37	40	41	41	45	45	45	45
	Opt-outs	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Adjusted Participants (Cum.)	79	91	104	111	116	127	133	134	155	169	183	198	198	198
	Net Participation (Cum.)	79	91	104	111	116	127	133	134	155	169	183	198	198	198
	Planned (Cum.)	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0
	Variance (Cum.)	-1,161.0	-1,149.0	-1,136.0	-1,123.0	-1,124.0	-1,113.0	-1,107.0	-1,106.0	-1,085.0	-1,071.0	-1,057.0	-1,042.0	-1,042.0	-1,042.0
	Cum % toward planned total (Net basis)	6.4%	7.3%	8.4%	9.0%	9.4%	10.2%	10.7%	10.8%	12.5%	13.6%	14.8%	16.0%	16.0%	16.0%
	Removal (Uninstalled) / Deactivation Rate	1.27%	1.10%	0.96%	3.60%	3.45%	4.72%	3.76%	2.24%	0.65%	0.00%	2.19%	0.00%	1.99%	3.10%
	Average % Opt-outs (rate)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Ex-Ante Estimated kW	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Summer kW Potential	Summer Peak Shaving Potential kW - Gross Participants	89	102	115	125	133	149	160	164	184	197	214	228	228	261
	Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW	15	16	17	21	24	30	35	38	39	39	42	42	42	42
	Dispatchable Summer Peak Shaving Potential - Total kW	74	86	98	104	109	119	125	126	146	159	172	186	186	219
	Realization Rate Weighted by Measure	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Adjustment for Realization Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net Summer Demand (Cum.)	74	86	98	104	109	119	125	126	146	159	172	186	186	219
	Planned Summer Demand (Cum.)	1,971.6	1,971.6	1,971.6	1,971.6	1,971.6	1,971.6	1,971.6	1,971.6	1,971.6	1,971.6	1,971.6	1,971.6	1,972	1,972
	Cum. % toward planned total (Net basis)	3.77%	4.34%	4.96%	5.29%	5.53%	6.05%	6.34%	6.39%	7.39%	8.06%	8.72%	9.44%	9.44%	11.11%
	Dispatchable Summer Peak Shaving Potential kW per Participant	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Program Performance	Cum. \$Admin. per Participant (Gross)	\$10	\$10	\$10	\$10	\$11	\$10	\$10	\$11	\$10	\$10	\$10	\$11	\$11	\$11
	Cum. \$Admin. per kW (Gross)	\$11	\$10	\$11	\$11	\$11	\$11	\$11	\$12	\$11	\$11	\$11	\$12	\$12	\$10
	Cum. \$EM&V per \$Total	8.1%	9.6%	14.6%	16.8%	18.6%	20.7%	19.6%	22.3%	22.3%	22.3%	23.5%	19.5%	19.5%	19.5%
	Cum. \$Rebate per Participant (Gross)	\$17	\$15	\$13	\$12	\$11	\$10	\$9	\$9	\$8	\$8	\$7	\$21	\$21	\$21



P.25 North Carolina Residential Water Savings Rewards Program 2022

P.25.1 2022 North Carolina Residential Water Savings Rewards Program Monthly Indicator Tables

Category	Indicator	2022 JAN	2022 FEB	2022 MAR	2022 APR	2022 MAY	2022 JUN	2022 JUL	2022 AUG	2022 SEP	2022 OCT	2022 NOV	2022 DEC	2022 Total	2020-2022 Total
VA - Residential Electric Vehicle Rewards Program	Direct Rebate														
	O&M (\$)														
	Direct Implementation														
	O&M (\$)														
	Direct EM&V														
	O&M (\$)														
	Indirect Other (Administrative)														
	Capital (\$)														
	Direct Implementation														
	O&M (\$)														
Participants ¹	Total	\$1,059	\$2,344	\$2,922	\$2,174	\$3,216	\$2,597	\$2,201	\$11,737	\$4,681	\$6,044	\$11,220	\$128,765	\$178,959	\$375,487
	Planned	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$26,330	\$615,260
	Variance	-\$25,271	-\$23,986	-\$23,408	-\$24,156	-\$23,114	-\$23,733	-\$24,129	-\$14,593	-\$21,649	-\$20,286	-\$15,110	\$102,435	-\$137,000	-\$239,773
	Annual % of Planned	0.3%	1.1%	2.0%	2.7%	3.7%	4.5%	5.2%	8.9%	10.4%	12.3%	15.9%	56.6%	57%	61%
	Total (Cumulative @ End of Month)	0	0	0	113	216	259	288	403	482	537	611	686	686	686
	Removals (Uninstalled) / Deactivations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Opt-outs	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Adjusted Participants (Cum.)	0	0	0	113	216	259	288	403	482	537	611	686	686	686
	Net Participation (Cum.)	0	0	0	113	216	259	288	403	482	537	611	686	686	686
	Planned (Cum.)	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0
Variance (Cum.)	-831.0	-831.0	-831.0	-718.0	-615.0	-572.0	-543.0	-428.0	-349.0	-294.0	-220.0	-145.0	-145.0	-145.0	
Cum % toward planned total (Net basis)	0.0%	0.0%	0.0%	13.6%	26.0%	31.2%	34.7%	48.5%	58.0%	64.6%	73.5%	82.6%	82.6%	82.6%	
Removal (Uninstalled) / Deactivation Rate	N/A	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Average % Opt-outs (rate)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Ex-Ante Estimated KW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Summer kW Potential	Summer Peak Shaving Potential kW - Gross Participants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Removed (Uninstalled) / Deactivated Summer Peak Shaving Potential kW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Dispatchable Summer Peak Shaving Potential - Total kW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Weighted by Measure	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Adjustment for Realization Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net Summer Demand (Cum.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Planned Summer Demand (Cum.)	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0	831.0
	Cum. % toward planned total (Net basis)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Dispatchable Summer Peak Shaving Potential kW per Participant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Measures														
No measures available															
Program Performance	Cum. \$Admin. per Participant (Gross)	N/A	N/A	N/A	\$84	\$45	\$38	\$34	\$26	\$22	\$20	\$18	\$24	\$24	\$24
	Cum. \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cum. \$EM&V per \$Total	15.7%	15.7%	15.5%	15.3%	15.1%	14.9%	14.7%	16.0%	16.5%	17.3%	19.5%	12.8%	12.8%	12.8%
	Cum. \$Rebate per Participant (Gross)	N/A	N/A	N/A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0



P.26 North Carolina Residential Lighting Program 2011–2012

NC- Residential Lighting Program		2011	2012	2011-2012
Category	Indicator	Total	Total	Program Total
O&M(\$)	Direct Rebate			
O&M(\$)	Direct Implementation			
O&M(\$)	Direct EM&V			
O&M(\$)	Indirect Other (Administrative)	\$5,847	\$1,066	\$6,913
Costs (\$)	Total	\$77,419	\$9,705	\$87,124
Costs (\$)	Planned	\$125,612	\$20,779	\$146,391
Costs (\$)	Variance	-\$48,193	-\$11,074	-\$59,267
	Cum. % toward planned total	61.6%	46.7%	59.5%
Participants	Total bulbs (Gross)	37,120	0	37,120
	Planned (Gross)	127,975		127,975
	Variance	-90,855	0	-90,855
	Cum % toward planned total (Gross)	29.0%		29.0%
Installed kWh/year	Total (Gross)	1,882,829	0	1,882,829
	84% Realization Rate Adjustment	-301,253	0	-301,253
	Adjusted Gross Savings	1,581,577	0	1,581,577
	65% Net-To-Gross Adjustment	-553,552	0	-553,552
	Net Adjusted Savings	1,028,025	0	1,028,025
	Planned (Net)	3,585,903		3,585,903
	Cum. % toward planned total (Net)	28.7%		28.7%
	Avg. per Bulb (Net)	28		28
Installed kW	Total (Gross)	205	0	205
	84% Realization Rate Adjustment	-33	0	-33
	Adjusted Gross Demand	172	0	172
	65% Net-To-Gross Adjustment	-60	0	-60
	Net Adjusted Demand	112	0	112
	Planned (Net)	298		298
	Cum. % toward planned total (Net)	37.5%		37.5%
	Avg. per Bulb (Net)	0.003		0.003
Program Performance	Cum. \$Admin. per Cum. Bulb (Gross)	\$0.2		\$0.2
	Cum. \$Admin. per Cum. kWh (Gross)	\$0.00		\$0.00
	Cum. \$Admin. per Cum. kW (Gross)	\$29		\$34
	Cum. SEM&V per Cum Total Costs (\$)	3.7%	17.4%	5.2%
	Cum. \$Rebate per Cum. Bulb (Gross)	\$1		\$1

1. Program closed end of 2012.



P.27 North Carolina Residential Low-income Program 2011-2015

NC- Residential Low-income Program Category	Indicator	2011* Total	2012 Total	2013 Total	2014 Total	2015 Total	2011-2015 Program Total
O&M (\$)	Direct Rebate						
O&M (\$)	Direct Implementation						
O&M (\$)	Direct EM&V						
O&M (\$)	Indirect Other (Administrative)						
Costs (\$)	Total	\$20,601	\$22,730	\$15,525	\$9,060	\$24,980	\$92,895
Costs (\$)	Planned	\$260,176	\$193,154	\$164,591	\$175,888	\$800,616	\$1,594,425
Costs (\$)	Variance	\$296,979	\$540,333	\$229,609	\$195,488	\$1,041,930	\$2,304,538
Costs (\$)	Cum. % toward planned total	87.6%	35.7%	71.7%	90.0%	76.8%	69.2%
	Audits	207	156	120	120	647	1,250
Participants	Total (Gross)	207	156	120	120	653	1,256
	Planned (Gross)	325	519	33	132	600	1,609
	Variance	-118	-363	87	-12	53	-353
	Cum. % toward planned total (Gross)	63.7%	30.1%	363.6%	90.9%	108.8%	78.1%
Installed kWh/year	Total Gross Deemed Savings	200,471	183,162	106,895	102,596	537,503	1,130,626
	Realization Rate Adjustment	-106,249	-97,076	-26,724	-38,986	-204,251	-473,286
	Adjusted Gross Savings	94,221	86,086	80,171	63,609	333,252	657,340
	Net-To-Gross Adjustment	-6,030	-5,510	-5,131	-4,071	-21,328	-42,070
	Net Adjusted Savings	88,191	80,576	75,040	59,538	311,924	615,270
	Planned Savings (Net)	134,347	195,653	85,480	106,694	1,170,600	1,692,774
	Cum. % Toward Planned Savings (Net)	65.6%	41.2%	87.8%	55.8%	26.6%	36.3%
	Avg. Savings Per Participant (Net)	426	517	625	496	478	490
Installed kW	Total Gross Deemed Demand	61	36	27	23	128	275
	Realization Rate Adjustment	-32.3	-19.2	-6.7	-8.7	-48.5	-115
	Adjusted Gross Demand	29	17	20	14	79	159
	Net-To-Gross Adjustment	-2	-1	-1	-1	-5	-10
	Net Adjusted Demand	27	16	19	13	74	149
	Planned Demand (Net)	23	38	16	16	55	148
	Cum. % Toward Planned Demand (Net)	116.6%	41.9%	117.4%	83.2%	135.7%	100.9%
	Avg. Demand Per Participant (Net)	0.1	0.1	0.2	0.1	0.1	0.1
Program Performance	Cum. \$ Admin. per Cum. Participant (Gross)	\$100	\$146	\$129	\$76	\$38	\$74
	Cum. \$ Admin. per Cum. kWh (Gross)	\$0.10	\$0.12	\$0.15	\$0.09	\$0.05	\$0.08
	Cum. \$ Admin. per Cum. kW (Gross)	\$338	\$627	\$580	\$395	\$196	\$338
	Cum. \$EM&V per Cum Total Costs (\$)	2.3%	2.7%	4.7%	3.0%	0.4%	1.7%
	Cum. \$Rebate per Cum. Participant (Gross)	\$1,067	\$989	\$1,011	\$1,043	\$1,090	\$1,062

1. Program closed end of 2015.



P.28 North Carolina Residential Heat Pump Tune-up Program 2014-2017

NC - Residential Heat Pump Tune-Up Program	Indicator	2014 Total	2015 Total	2016 Total	2017 Total	2014-2017 Program Total
O&M(\$)	Direct Rebate	\$3,186	\$15,540	\$6,321	\$2,018	\$27,065
O&M(\$)	Direct Implementation	\$99,944	\$467,762	\$207,995	\$51,288	\$826,988
O&M(\$)	Direct EM&V	\$395,676	\$439,770	\$461,312	\$54,112	\$1,350,870
O&M(\$)	Indirect Other (Administrative)	-\$295,732	\$27,992	-\$253,318	-\$2,825	-\$523,882
Costs (\$)	Total	25%	106%	45%	95%	61%
Costs (\$)	Planned					
Costs (\$)	Variance					
Costs (\$)	Annual % of Planned					
Participants ¹	Total (Gross)	581	3,307	1,274	125	5,287
Participants ¹	Planned (Gross)	2,777	2,777	1,542	0	7,096
Participants ¹	Variance	-2,196	530	-268	125	-1,809
Participants ¹	Annual % of Planned (Gross)	21%	119%	83%		75%
Installed kW/year	Total Gross Deemed Savings (kW/h/yr)	154,857	843,691	322,679	32,050	1,353,277
99%	Realization Rate Adjustment (kW/h/yr)	-1,239	-6,750	-2,581	-256	-10,826
90%	Realization Rate Adjusted Savings (kW/h/yr)	153,618	836,942	320,098	31,793	1,342,451
	Net-To-Gross Adjustment (kW/h/yr)	-15,262	-83,694	-32,010	-3,179	-134,245
	Net Adjusted Savings (kW/h/yr)	138,256	753,248	288,088	28,614	1,208,206
	Planned Net Savings (kW/h/yr)	2,116,074	2,116,074	1,743,26	0	4,406,474
	Annual % Toward Planned Net Savings (kW/h)	7%	36%	165%		27%
	Avg. Gross Savings Per Participant (kW/h/yr)	267	255	253	256	256
	Avg. Net Savings Per Participant (kW/h/yr)	238	228	226	229	229
Installed kW	Total Gross Demand Reduction (kW)	80	625	241	25	971
99%	Realization Rate Adjustment (kW)	-1	-5	-2	0	-8
90%	Realization Rate Adjusted Gross Demand Reduction(kW)	79	620	239	25	963
	Net-To-Gross Adjustment (kW)	-8	-62	-24	-2	-96
	Net Adjusted Demand Reduction (kW)	71	558	215	22	867
	Planned Net Demand Reduction (kW)	639	639	58	0	1,336
	Annual % Toward Planned Net Reduction (kW)	11%	87%	368%		65%
	Avg. Gross Demand Reduction Per Participant (kW)	0.14	0.19	0.19	0.20	0.18
	Avg. Net Demand Reduction Per Participant (kW)	0.12	0.17	0.17	0.18	0.16
Program Performance	Annual \$Admin. per Participant (Gross)	\$5	\$5	\$5	\$16	\$5
	Annual \$Admin. per kW/year (Gross)	\$0.02	\$0.02	\$0.02	\$0.06	\$0.02
	Annual \$Admin. per kW (Gross)	\$40	\$25	\$26	\$81	\$28
	Annual SEM&V per \$Total	6%	1%	3%	8%	3%
	Annual \$Rebate per Participant (Gross)	\$90	\$90	\$89	\$90	\$90

1. Program closed end of 2017.
 2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.



P.29 North Carolina Residential Heat Pump Upgrade Program 2014–2017

NC - Residential Heat Pump Upgrade Program	Indicator	2014 Total	2015 Total	2016 Total	2017 Total	2014-2017 Program Total
O&M (\$)	Direct Rebate	\$1,847	\$7,845	\$8,235	\$2,527	\$20,454
O&M (\$)	Direct Implementation	\$47,447	\$270,195	\$270,955	\$64,223	\$651,821
O&M (\$)	Direct EM&V	\$350,500	\$383,960	\$424,079	\$33,581	\$1,192,119
O&M (\$)	Indirect Other (Administrative)	-\$303,052	-\$114,764	-\$153,124	\$30,643	-\$540,298
	Annual % of Planned	14%	70%	64%	191%	55%
Costs (\$)	Total	44	597	665	118	1,424
Costs (\$)	Planned (Gross)	1,200	1,200	252	0	2,652
Costs (\$)	Variance	-1,156	-603	413	118	-1,228
Costs (\$)	Annual % of Planned (Gross)	4%	50%	264%		54%
Participants ¹	Total (Gross)	72,449	282,170	317,574	63,092	735,286
Installed kWh/year	Realization Rate Adjustment (kWh/yr)	4,854	-63,206	-71,137	-14,133	-143,621
78%	Realization Rate Adjusted Savings (kWh/yr)	77,303	218,964	246,438	48,960	591,665
45%	Net-To-Gross Adjustment (kWh/yr)	-11,595	-120,211	-135,294	-26,879	-293,980
	Net Adjusted Savings (kWh/yr)	65,708	98,753	111,143	22,081	297,685
	Planned Net Savings (kWh/yr)	1,038,000	1,038,000	49,858	0	2,125,858
	Annual % Toward Planned Net Savings (kWh)	6%	10%	223%		14%
	Avg. Gross Savings Per Participant (kWh/yr)	1,647	473	478	535	516
	Avg. Net Savings Per Participant (kWh/yr)	1,493	165	167	187	209
Installed kW	Total Gross Demand Reduction (kW)	19	58	69	14	160
89%	Realization Rate Adjustment (kW)	-3	-6	-8	-2	-19
	Realization Rate Adjusted Gross Demand Reduction(kW)	16	51	61	13	141
45%	Net-To-Gross Adjustment (kW)	-2	-28	-33	-7	-71
	Net Adjusted Demand Reduction (kW)	14	23	27	6	70
	Planned Net Demand Reduction (kW)	348	348	18	0	714
	Annual % Toward Planned Net Reduction (kW)	4%	7%	153%	10%	10%
	Avg. Gross Demand Reduction Per Participant (kW)	0.44	0.10	0.10	0.12	0.11
	Avg. Net Demand Reduction Per Participant (kW)	0.31	0.04	0.04	0.05	0.05
Program Performance	Annual \$Admin. per Participant (Gross)	\$42	\$13	\$12	\$21	\$14
	Annual \$Admin. per kWh/year (Gross)	\$0.03	\$0.03	\$0.03	\$0.04	\$0.03
	Annual \$Admin. per kW (Gross)	\$96	\$136	\$120	\$174	\$127.89
	Annual SEM&V per \$Total	34%	11%	7%	14%	12%
	Annual \$Rebate per Participant (Gross)	\$223	\$212	\$222	\$225	\$218

1. Program closed end of 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.
3. Realization Rate Adjustment occurred in 2015. Prior to 2012–2014 kWh realization rate was 106.7%, kW realization rate was 83.1%, and Net to Gross rate was 85%. From the start of 2015 forward kWh realization rate was 78%, kW realization rate was 89%, and Net to Gross rate was 45%.



P.30 North Carolina Residential Duct Sealing Program 2014-2017

NC - Residential Duct Sealing Program		2014	2015	2016	2017	2014-2017
Category	Indicator	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate	\$951	\$3,700	\$4,363	\$690	\$9,704
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)					
Costs (\$)	Total	\$21,105	\$102,470	\$143,554	\$17,533	\$284,662
Costs (\$)	Planned	\$115,655	\$110,723	\$118,580	\$18,338	\$363,296
Costs (\$)	Variance	-\$94,550	-\$8,253	\$24,974	-\$805	-\$78,634
	Annual % of Planned	18%	93%	121%	96%	78%
Participants ¹	Total (Gross)	0	323	217	14	554
	Planned (Gross)	346	346	101	0	793
	Variance	-346	-23	116	14	-239
	Annual % of Planned (Gross)	0%	93%	215%		70%
Installed kW/year	Total Gross Deemed Savings (kW/yr)	0	201,495	129,136	8,003	338,633
49%	Realization Rate Adjustment (kW/yr)	0	-101,956	-65,343	-4,049	-171,348
	Realization Rate Adjusted Savings (kW/yr)	0	99,538	63,793	3,953	167,285
80%	Net-To-Gross Adjustment (kW/yr)	0	-19,908	-12,759	-791	-33,457
	Net Adjusted Savings (kW/yr)	0	79,631	51,034	3,163	133,828
	Planned Net Savings (kW/yr)	181,304	181,304	12,013	0	374,621
	Annual % Toward Planned Net Savings (kW/yr)	0%	44%	425%		36%
	Avg. Gross Savings Per Participant (kW/yr)	624	624	595	572	611
	Avg. Net Savings Per Participant (kW/yr)	247	247	235	226	242
Installed kW	Total Gross Demand Reduction (kW)	0	148	95	6	249
43%	Realization Rate Adjustment (kW)	0	-85	-55	-3	-143
	Realization Rate Adjusted Gross Demand Reduction (kW)	0	63	40	2	106
80%	Net-To-Gross Adjustment (kW)	0	-13	-8	0	-21
	Net Adjusted Demand Reduction (kW)	0	50	32	2	85
	Planned Net Demand Reduction (kW)	114	114	4	0	232
	Annual % Toward Planned Net Reduction (kW)	0%	44%	802%		36%
	Avg. Gross Demand Reduction Per Participant (kW)	0.46	0.46	0.44	0.42	0.45
	Avg. Net Demand Reduction Per Participant (kW)	0.16	0.16	0.15	0.14	0.15
Program Performance	Annual \$Admin. per Participant (Gross)	\$11	\$11	\$20	\$49	\$18
	Annual \$Admin. per kW/year (Gross)	\$0.02	\$0.02	\$0.03	\$0.09	\$0.03
	Annual \$Admin. per kW (Gross)	\$25	\$25	\$46	\$117	\$39
	Annual SEM&V per \$Total	41%	5%	5%	25%	9%
	Annual \$Rebate per Participant (Gross)	\$125	\$125	\$125	\$125	\$125

1. Program closed end of 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.



P.31 North Carolina Residential Home Energy Check-up Program 2014–2017

NC - Residential Home Energy Check-Up Program		2014	2015	2016	2017	2014-2017
Category	Indicator	Total	Total	Total	Total ²	Program Total
O&M(\$)	Direct Rebate					
O&M(\$)	Direct Implementation					
O&M(\$)	Direct EM&V					
O&M(\$)	Indirect Other (Administrative)	\$654	\$11,982	\$658	\$1,086	\$14,380
Costs (\$)	Total	\$14,345	\$351,877	\$21,660	\$27,588	\$415,470
Costs (\$)	Planned	\$86,513	\$92,939	\$98,144	\$60,535	\$338,131
Costs (\$)	Variance	-\$72,168	\$258,938	-\$76,484	-\$32,946	\$77,339
	Annual % of Planned	17%	379%	44%	46%	123%
Participants ¹	Total (Gross)	0	996	4	49	1,049
	Planned (Gross)	160	160	881	0	1,201
	Variance	-160	836	-877	49	-152
	Annual % of Planned (Gross)	0%	623%	0%		87%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	593,172	1,495	35,051	629,718
154%	Realization Rate Adjustment (kWh/yr)	0	317,347	800	18,752	336,899
	Realization Rate Adjusted Savings (kWh/yr)	0	910,520	2,294	53,803	966,617
82%	Net-To-Gross Adjustment (kWh/yr)	0	-164,804	-415	-9,738	-174,958
	Net Adjusted Savings (kWh/yr)	0	745,716	1,879	44,065	791,659
	Planned Net Savings (kWh/yr)	162,720	162,720	308,536	0	633,976
	Annual % Toward Planned Net Savings (kWh)	0%	458%	1%		125%
	Avg. Gross Savings Per Participant (kWh/yr)		596	374	715	600
	Avg. Net Savings Per Participant (kWh/yr)		749	470	899	755
Installed kW	Total Gross Demand Reduction (kW)	0	52	0	2	55
154%	Realization Rate Adjustment (kW)	0	28	0	1	29
	Realization Rate Adjusted Gross Demand Reduction (kW)	0	80	0	4	84
82%	Net-To-Gross Adjustment (kW)	0	-14	0	-1	-15
	Net Adjusted Demand Reduction (kW)	0	65	0	3	69
	Planned Net Demand Reduction (kW)	29	29	67	0	125
	Annual % Toward Planned Net Reduction (kW)	0%	227%	1%		55%
	Avg. Gross Demand Reduction Per Participant (kW)		0.05	0.04	0.05	0.05
	Avg. Net Demand Reduction Per Participant (kW)		0.07	0.05	0.06	0.07
Program Performance	Annual \$Admin. per Participant (Gross)		\$12	\$165	\$22	\$14
	Annual \$Admin. per kWh/year (Gross)		\$0.02	\$0.44	\$0.03	\$0.02
	Annual \$Admin. per kW (Gross)		\$230	\$3,983	\$443	\$263
	Annual SEM&V per \$Total	24.8%	2.3%	50.0%	20.2%	6.7%
	Annual \$Rebate per Participant (Gross)		\$221	\$200	\$193	\$220

1. Program closed end of 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.
3. The 2017 total gross deemed savings values reported in this table include adjustments of -2.1 kWh/year and -0.00044 kW made to the January 2017 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017. Specifically, the correction was in section 2.1.5 for “Low-Flow Showerhead” measures, to the “ΔT” variable, which is a measure of the change in temperature of the water used for shower and temperature entering the house (ΔT = Tshower – Tin house). STEP Manual 7.0.0 reported the value as 44.9°F, but has been corrected to 44.1°F. This correction is reflected in STEP Manual version 8.0.0 in this EM&V report.
4. Realization Rate Adjustment occurred in 2015. 2012-2014 Net to Gross Adjustment was 80.0%. From 2015 forward Net to Gross Adjustment was 82% and Realization Rate as adjusted to 154%.



P.32 North Carolina Residential Retail LED Program 2017-2019

NC- Residential LED Program		Indicator	2017 Total ²	2018 Total	2019 Total	2017-2019 Program Total
Category						
O&M (\$)	Direct Rebate		\$26,160	\$73,173	\$11,032	\$110,366
O&M (\$)	Direct Implementation		\$664,838	\$1,295,830	\$190,393	\$2,151,061
O&M (\$)	Direct EM&V		\$1,088,516	\$1,171,147	\$92,757	\$2,352,420
O&M (\$)	Indirect Other (Administrative)		-\$423,678	\$124,683	\$97,636	-\$201,359
			61.1%	110.6%	205.3%	91.4%
Costs (\$)	Total					
Costs (\$)	Planned		70,261	264,236	0	334,497
Costs (\$)	Variance		165,000	220,000	0	385,000
			-94,739	44,236	0	-50,503
			42.6%	120.1%	N/A	86.9%
Participants ¹						
	Total (Gross)		70,261	264,236	0	334,497
	Planned (Gross)		165,000	220,000	0	385,000
	Variance		-94,739	44,236	0	-50,503
	Annual % of Planned (Gross)		42.6%	120.1%	N/A	86.9%
Purchased kWh/year						
	Total Gross Energy Savings (kWh/yr)		2,215,073	5,918,263	0	8,133,336
100%	Realization Rate Adjustment (kWh/yr)		0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)		2,215,073	5,918,263	0	8,133,336
85%	Net-To-Gross Adjustment (kWh/yr)		-332,261	-887,739	0	-1,220,000
	Net Adjusted Savings (kWh/yr)		1,882,812	5,030,524	0	6,913,336
	Planned Net Savings (kWh/yr)		2,250,789	3,874,754	0	6,125,543
	Annual % Toward Planned Net Savings (kWh)		83.7%	129.8%	N/A	112.9%
	Avg. Gross Savings Per Participant (kWh/yr)		32	22	N/A	24
	Avg. Net Savings Per Participant (kWh/yr)		27	19	N/A	21
Purchased kW						
	Total Gross Demand Reduction (kW)		242.4	606.0	0.0	848.5
100%	Realization Rate Adjustment (kW)		0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)		242.4	606.0	0.0	848.5
85%	Net-To-Gross Adjustment (kW)		-36.4	-90.9	0.0	-127.3
	Net Adjusted Demand Reduction (kW)		206.1	515.1	0.0	721.2
	Planned Net Demand Reduction (kW)		331.1	433.0	0.0	764.1
	Annual % Toward Planned Net Reduction (kW)		62.2%	119.0%	N/A	94.4%
	Avg. Gross Demand Reduction Per Participant (kW)		0.0	0.0	N/A	0.0
	Avg. Net Demand Reduction Per Participant (kW)		0.0	0.0	N/A	0.0
Program Performance						
	Annual Admin. per Participant (Gross)		\$0.37	\$0.28	N/A	\$0.33
	Annual S.Admin. per kWh/year (Gross)		\$0.01	\$0.01	N/A	\$0.01
	Annual S.Admin. per kW (Gross)		\$108	\$121	N/A	\$130
	Annual SEM&V per \$Total		6.8%	6.6%	17.7%	7.7%
	Annual \$Rebate per Participant (Gross)		\$1.87	\$2.68	N/A	\$2.76

5. Program closed end of 2019.
 6. A participant is a unique account number.



P.33 North Carolina Commercial Lighting Program 2011–2014

NC- Commercial Lighting Program		2011	2012	2013	2011-2014
Category	Indicator	Total	Total	Total	Program Total
O&M(\$)	Direct Rebate				
O&M(\$)	Direct Implementation				
O&M(\$)	Direct EM&V				
O&M(\$)	Indirect Other (Administrative)	\$16,336	\$7,585	\$5,209	\$35,758
Capital (\$)		\$0	\$0	\$0	\$0
Costs (\$)	Total	\$216,305	\$85,178	\$51,201	\$485,059
Costs (\$)	Planned	\$294,641	\$546,511	\$206,515	\$1,251,849
Costs (\$)	Variance	-\$78,336	-\$461,332	-\$155,314	-\$766,790
	Cum. % toward planned total	73.4%	15.6%	24.8%	38.7%
Participants	Total (Gross)	1	25	0	47
	Planned (Gross)	2	9	0	15
	Variance	-1	16	0	32
	Cum % toward planned total (Gross)	50.0%	277.8%		313.3%
Installed kWh/year	Total Gross Deemed Savings	1,787,400	409,819	0	3,092,876
	178.0% Realization Rate Adjustment ¹	1,376,298	320,111	0	2,394,058
	Adjusted Gross Savings	3,163,699	729,930	0	5,486,934
	50.0% Net-To-Gross Adjustment	-1,581,849	-364,965	0	-2,743,467
	Net Adjusted Savings	1,581,849	364,965	0	2,743,467
	Planned Savings (Net)	515,922	2,172,078	0	2,825,967
	Cum. % Toward Planned Savings (Net)	306.6%	16.8%		97.1%
Avg. Savings Per Participant (Net)	1,581,849	14,599		58,372	
Installed kW	Total Gross Deemed Demand	682	110	0	1,027
	98.0% Realization Rate Adjustment	-13.6	-2	0	-21
	Adjusted Gross Demand	668	108	0	1,006
	50.0% Net-To-Gross Adjustment	-334	-54	0	-503
	Net Adjusted Demand	334	54	0	503
	Planned Demand (Net)	62	275	0	337
	Cum. % Toward Planned Demand (Net)	538.7%	19.6%		149.3%
Avg. Demand Per Participant (Net)	334.0	2.2		10.7	
Program Performance	Cum. \$Admin. per Cum. Participant (Gross)	\$16,336	\$303		\$761
	Cum. \$Admin. per Cum. kWh (Gross)	\$0.01	\$0.02		\$0.01
	Cum. \$Admin. per Cum. kW (Gross)	\$23.96	\$69.04		\$34.82
	Cum. \$EM&V per Cum Total Costs (\$)	4.62%	2.21%	0.00%	6.5%
	Cum. \$Rebate per Cum. Participant (Gross)	\$158,605	\$1,726		\$5,465

1. Program closed end of 2014.
2. Realization rate is 177% January 1st through May 30th, 179% June 1st through September 30th, and 177% October 1st through December 31st.



P.34 North Carolina Commercial HVAC Program 2011–2014

NC- Commercial HVAC Program		2011	2012	2013	2011-2014
Category	Indicator	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate				
O&M (\$)	Direct Implementation				
O&M (\$)	Direct EM&V				
O&M (\$)	Indirect Other (Administrative)	\$1,140	\$7,812	\$5,177	\$18,219
Capital (\$)		\$0	\$0	\$0	\$0
Costs (\$)	Total	\$15,093	\$73,854	\$50,910	\$220,106
Costs (\$)	Planned	\$55,015	\$103,728	\$97,195	\$357,665
Costs (\$)	Variance	-\$39,922	-\$29,875	-\$46,285	-\$137,559
	Cum. % toward planned total	27.4%	71.2%	52.4%	61.5%
Participants	Total (Gross)	0	4	0	4
	Planned (Gross)	2	11	0	18
	Variance	-2	-7	0	-14
	Cum % toward planned total (Gross)	0.0%	36.4%		22.2%
Installed kWh/year	Total Gross Deemed Savings	0	388,155	0	388,155
63.3%	Realization Rate Adjustment ¹	0	-142,453	0	-142,453
	Adjusted Gross Savings	0	245,702	0	245,702
45.0%	Net-To-Gross Adjustment	0	-135,136	0	-135,136
	Net Adjusted Savings	0	110,566	0	110,566
	Planned Savings (Net)	58,153	299,847	0	525,666
	Cum. % Toward Planned Savings (Net)	0.0%	36.9%		21.0%
	Avg. Savings Per Participant (Net)		27,641		27,641
Installed kW	Total Gross Deemed Demand	0	73	0	73
97.0%	Realization Rate Adjustment	0.0	-2	0	-2
	Adjusted Gross Demand	0	71	0	71
45.0%	Net-To-Gross Adjustment	0	-39	0	-39
	Net Adjusted Demand	0	32	0	32
	Planned Demand (Net)	22	122	0	144
	Cum. % Toward Planned Demand (Net)	0.0%	26.2%		22.2%
	Avg. Demand Per Participant (Net)		8		8
Program Performance	Cum. \$Admin. per Cum. Participant (Gross)		\$1,953		\$4,555
	Cum. \$Admin. per Cum. kWh (Gross)		\$0.02		\$0.05
	Cum. \$Admin. per Cum. kW (Gross)		\$107		\$249
	Cum. \$EM&V per Cum Total Costs (\$)	81.6%	17.5%	0.0%	20.1%
	Cum. \$Rebate per Cum. Participant (Gross)		\$6,323		\$6,323

1. Program closed end of 2014.
2. Realization rate is 63% January 1st through May 30th, 35% June 1st through September 30th, and 63% October 1st through December 31st.



P.35 North Carolina Non-Residential Duct Testing and Sealing Program 2014–2017

NC - Non-Residential Duct Sealing and Testing Program		2014	2015	2016	2017	2014-2017
Category	Indicator	Total	Total	Total ²	Total	Program Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$8,090	\$28,601	\$11,032	\$5,524	\$53,248
Costs (\$)	Total	\$253,157	\$746,482	\$362,980	\$140,392	\$1,503,010
Costs (\$)	Planned	\$367,630	\$381,014	\$400,363	\$71,633	\$1,220,640
Costs (\$)	Variance	-\$114,474	\$365,468	-\$37,383	\$68,758	\$282,370
	Annual % of Planned	69%	196%	91%	196%	123%
Participants ¹	Total (Gross)	60	152	33	5	250
	Planned (Gross)	30	30	39	0	99
	Variance	30	122	-6	5	149
	Annual % of Planned (Gross)	200%	507%	85%		253%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	595,895	2,400,813	550,135	184,255	3,731,098
87%	Realization Rate Adjustment (kWh/yr)	-77,466	-312,106	-71,518	-23,953	-485,043
	Realization Rate Adjusted Savings (kWh/yr)	518,428	2,088,707	478,618	160,302	3,246,055
97%	Net-To-Gross Adjustment (kWh/yr)	-14,516	-58,484	-13,401	-4,488	-90,890
	Net Adjusted Savings (kWh/yr)	503,912	2,030,224	465,216	155,813	3,155,166
	Planned Net Savings (kWh/yr)	989,610	989,610	230,534	0	2,209,754
	Annual % Toward Planned Net Savings (kWh)	51%	205%	202%		143%
	Avg. Gross Savings Per Participant (kWh/yr)	9,932	15,795	16,671	36,851	14,924
	Avg. Net Savings Per Participant (kWh/yr)	8,399	13,357	14,097	31,163	12,621
Installed kW	Total Gross Demand Reduction (kW)	65	292	160	54	570
94%	Realization Rate Adjustment (kW)	-4	-17	-9	-3	-33
	Realization Rate Adjusted Gross Demand Reduction (kW)	61	275	150	51	537
97%	Net-To-Gross Adjustment (kW)	-2	-8	-4	-1	-15
	Net Adjusted Demand Reduction (kW)	60	267	146	49	522
	Planned Net Demand Reduction (kW)	221	221	95	0	537
	Annual % Toward Planned Net Reduction (kW)	27%	121%	154%		97%
	Avg. Gross Demand Reduction Per Participant (kW)	1.08	1.92	4.84	10.77	2.28
	Avg. Net Demand Reduction Per Participant (kW)	0.99	1.76	4.43	9.86	2.09
Program Performance	Annual \$Admin. per Participant (Gross)	\$135	\$188	\$334	\$1,105	\$213
	Annual \$Admin. per kWh/year (Gross)	\$0.01	\$0.01	\$0.02	\$0.03	\$0.01
	Annual \$Admin. per kW (Gross)	\$124	\$98	\$69	\$103	\$93.42
	Annual \$EM&V per \$Total	9.3%	0.7%	2.0%	3.7%	2.8%
	Annual \$Rebate per Participant (Gross)	\$3,015	\$4,265	\$9,551	\$23,994	\$5,058

1. Program closed end of 2017.
2. A participant is the first instance of unique account number that has been installed and rebated. A unique account number that may have multiple approved rebates in two or more different months is counted as a single participant.
3. The 2016 total gross deemed savings values reported in this table differs from values in the May 1, 2017 EM&V report, and have been refiled with the Commission. An adjustments totaled -83,464 kWh/year and 0 kW for 2016 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017, in section 12. The adjustment was made to full load heating hours (FLHheat) in Tables 90 and 91 to be consistent with those in the Mid-Atlantic TRM v 6, in response to requests by the North Carolina Public Staff Utilities Commission Re: Docket No. E-22, Sub 545, on October 23, 2017. This affected multiple Non-Residential HVAC measures (e.g. heat pumps, variable refrigerant flow, mini split systems) that reference Table 90 and 91, in multiple Non-Residential programs. This adjustment is reflected in STEP Manual version 8.0.0 in this EM&V report.
4. Another adjustment was made to correct the full load cooling hours in North Carolina for this program. The code that calculated this savings did not match the STEP Manual v 7.0.0.



P.36 North Carolina Non-Residential Energy Audit Program 2014–2017

Category	Indicator	2014 Total	2015 Total	2016 Total	2017 Total	2014-2017 Program Total
O&M (\$)	Direct Rebate	\$6,487	\$3,164	\$3,088	\$3,936	\$16,675
O&M (\$)	Direct Implementation	\$199,201	\$130,744	\$101,589	\$100,018	\$531,553
O&M (\$)	Direct EM&V	\$142,946	\$124,892	\$130,094	\$19,406	\$417,338
O&M (\$)	Indirect Other (Administrative)	\$56,255	\$5,852	-\$28,505	\$80,612	\$114,215
Costs (\$)	Total	139%	105%	78%	515%	127%
Costs (\$)	Planned					
Costs (\$)	Variance					
Costs (\$)	Annual % of Planned					
Audits	Total (Gross)	16	81	14	0	111
Participants ¹	Total (Gross)	16	78	12	2	108
	Planned (Gross)	37	37	48	0	122
	Variance	-21	41	-36	2	-14
	Annual % of Planned (Gross)	43%	211%	25%		89%
Installed kWh/year	Total (Gross)	495,669	225,418	270,829	825,840	1,817,756
	Attribution Rate weighted by Measure	99%	99%	99%	76%	89%
	Realization Rate weighted by Measure	99%	69%	94%	79%	85%
	Adjusted (Net) by Realization Rate and Attribution Rate	487,729	153,498	253,571	491,719	1,386,517
	Planned (Net)	1,093,017	827,170	323,638	0	2,243,824
	Annual % Toward Planned Net Savings (kWh)	45%	19%	78%		62%
	Avg. Gross Savings Per Participant (kWh/yr)	30,979	2,890	22,569	412,920	16,831
	Avg. Net Savings Per Participant (kWh/yr)	30,483	1,968	21,131	245,859	12,858
Installed kW	Total (Gross)	57	30	31	147	264
	Attribution Rate weighted by Measure	99%	99%	99%	76%	86%
	Realization Rate weighted by Measure	99%	64%	94%	79%	83%
	Adjusted kW (Net)	55	20	29	80	184
	Planned (Net)	195	179	50	0	424
	Annual % Toward Planned Net Reduction (kW)	28.5%	11.3%	58%		43%
	Avg. Gross Demand Reduction Per Participant (kW)	3.6	0.4	2.5	73.6	2.4
	Avg. Net Demand Reduction Per Participant (kW)	3.5	0.3	2.4	39.9	1.7
Program Performance	Annual \$Admin. per Participant (Gross)	\$405	\$41	\$257	\$1,968	\$154
	Annual \$Admin. per kW/year (Gross)	\$0.01	\$0.01	\$0.01	\$0.00	\$0.01
	Annual \$Admin. per kW (Gross)	\$114	\$106	\$101	\$27	\$63
	Annual \$EM&V per \$Total	12.2%	4.5%	7.2%	7.0%	8.4%
	Annual \$Rebate per Participant (Gross)	\$8,988	\$916	\$6,886	\$18,631	\$3,103

1. Program closed end of 2017.
2. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.



P.37 North Carolina Non-Residential Heating and Cooling Efficiency Program (DSM Phase III) 2015-2020

Category	Indicator	2015 Total	2016 Total ¹	2017 Total	2015-2017 Program Total	2018 Total	2019 Total	2020 Total	2015-2020 Program Total
NC-Non-Residential Heating & Cooling Efficiency Program	Indicator								
O&M (\$)	Direct Rebate	\$1,360	\$1,610	\$2,353	\$5,323	\$4,390	\$2,934	\$712	\$13,359
O&M (\$)	Direct Implementation	\$40,347	\$52,963	\$59,792	\$153,101	\$77,749	\$57,884	\$15,659	\$304,393
O&M (\$)	Direct EM&V	\$12,4310	\$121,415	\$122,498	\$368,223	\$126,949	\$101,892	\$0	\$597,064
O&M (\$)	Indirect Other (Administrative)	\$83,963	\$68,452	\$62,706	-\$215,122	-\$49,200	-\$44,007	\$15,659	-\$292,671
Costs (\$)	Total	32%	44%	49%	42%	61%	57%	N/A	51%
Costs (\$)	Planned								
Costs (\$)	Variance								
Costs (\$)	Annual % of Planned								
Participants ¹	Total (Gross)	3	6	3	12	3	1	0	16
Participants ¹	Planned (Gross)	48	52	53	153	53	12	0	218
Participants ¹	Variance	-45	-46	-50	-141	-50	-11	0	-202
Participants ¹	Annual % of Planned (Gross)	6%	12%	6%	8%	6%	8%	N/A	7%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	91,144	289,500	82,971	463,615	225,775	83,099	0	772,489
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0
100%	Realization Rate Adjusted Savings (kWh/yr)	91,144	289,500	82,971	463,615	225,775	83,099	0	772,489
70%	Net-To-Gross Adjustment (kWh/yr)	-27,343	-86,850	-24,891	-139,085	-67,732	-24,930	0	-231,747
70%	Net Adjusted Savings (kWh/yr)	63,801	202,650	58,080	324,531	158,042	58,170	0	540,742
70%	Planned Net Savings (kWh/yr)	606,768	1,619,973	2,563,872	4,790,614	2,043,754	168,545	0	7,002,913
70%	Annual % Toward Planned Net Savings (kWh)	11%	13%	2%	7%	8%	35%	N/A	8%
70%	Avg. Gross Savings Per Participant (kWh/yr)	30,381	48,250	27,657	38,635	75,258	83,099	N/A	48,281
70%	Avg. Net Savings Per Participant (kWh/yr)	21,267	33,775	19,360	27,044	52,681	58,170	N/A	33,796
Installed kW	Total Gross Demand Reduction (kW)	26.9	93.2	-40.3	79.9	84.7	13.3	0.0	177.9
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100%	Realization Rate Adjusted Gross Demand Reduction(kW)	26.9	93.2	-40.3	79.9	84.7	13.3	0.0	177.9
70%	Net-To-Gross Adjustment (kW)	-8.1	-28.0	12.1	-24.0	-25.4	-4.0	0.0	-53.4
70%	Net Adjusted Demand Reduction (kW)	18.8	65.3	-28.2	55.9	59.3	9.3	0.0	124.5
70%	Planned Net Demand Reduction (kW)	154.2	274.7	1,042.3	1,471.1	497.0	41.0	0.0	2,009.1
70%	Annual % Toward Planned Net Reduction (kW)	12.2%	23.8%	-2.7%	3.8%	11.9%	22.8%	N/A	6.2%
70%	Avg. Gross Demand Reduction Per Participant (kW)	9.0	15.5	-13.4	6.7	28.2	13.3	N/A	11.1
70%	Avg. Net Demand Reduction Per Participant (kW)	6.3	10.9	-9.4	4.7	19.8	9.3	N/A	7.8
Program Performance	Annual \$Admin. per Participant (Gross)	\$453	\$268	\$784	\$444	\$1,463	\$2,934	N/A	\$835
Program Performance	Annual \$Admin. per kWh/year (Gross)	\$0.01	\$0.01	\$0.03	\$0.01	\$0.02	\$0.04	N/A	\$0.02
Program Performance	Annual \$Admin. per kW (Gross)	\$51	\$17	-\$58	\$67	\$52	\$220	N/A	\$75
Program Performance	Annual SEM&V per \$T total	14%	15%	15%	14%	11%	7.8%	95.2%	16%
Program Performance	Annual \$Rebate per Participant (Gross)	\$2,728	\$3,404	\$6,996	\$4,133	\$11,613	\$21,728	N/A	\$6,635

1. A participant is a unique account number.



P.38 North Carolina Non-Residential Lighting Systems & Controls (DSM Phase III) Program 2015-2022

Category	Indicator	2015 Total	2016 Total ¹	2017 Total	2018 Total	2019 Total	2020 Total	2015-2020 Program Total
O&M (\$)	Direct Rebate							
O&M (\$)	Direct Implementation							
O&M (\$)	Direct EM&V							
O&M (\$)	Indirect Other (Administrative)							
Capital (\$)	Direct Implementation	\$3,511	\$11,956	\$9,940	\$14,072	\$22,295	\$4,923	\$66,698
		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total	\$122,739	\$393,406	\$252,605	\$249,209	\$413,562	\$88,425	\$1,519,945
Costs (\$)	Planned	\$357,955	\$359,278	\$347,298	\$403,711	\$230,531	\$0	\$1,698,773
Costs (\$)	Variance	-\$235,216	\$34,128	-\$94,693	-\$154,502	\$183,030	\$88,425	-\$178,829
	Annual % of Planned	34%	109%	73%	62%	179%	N/A	89%
Participants ⁵	Total (Gross)	13	43	23	43	62	17	201
	Planned (Gross)	96	102	104	119	43	0	464
	Variance	-83	-59	-81	-76	19	17	-263
	Annual % of Planned (Gross)	14%	42%	22%	36%	144%	N/A	43%
Installed kWh/year	Total Gross Energy Savings (kWh/yr)	564,326	3,333,527	1,738,121	5,172,076	3,030,032	601,830	14,439,912
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	564,326	3,333,527	1,738,121	5,172,076	3,030,032	601,830	14,439,912
70%	Net-To-Gross Adjustment (kWh/yr)	-169,298	-1,000,058	-521,436	-1,551,623	-909,010	-180,549	-4,331,973
	Net Adjusted Savings (kWh/yr)	395,028	2,333,469	1,216,685	3,620,453	2,121,023	421,281	10,107,938
	Planned Net Savings (kWh/yr)	1,752,864	1,619,973	2,220,165	2,661,116	1,213,184	0	9,467,302
	Annual % Toward Planned Net Savings (kWh)	23%	144%	55%	156%	175%	N/A	107%
	Avg. Gross Savings Per Participant (kWh/yr)	43,410	77,524	75,570	120,281	48,871	35,402	71,840
	Avg. Net Savings Per Participant (kWh/yr)	30,387	54,267	52,899	84,197	34,210	24,781	50,288
Installed kW	Total Gross Demand Reduction (kW)	104.6	743.2	334.5	1,109.9	594.3	94.8	2,981.3
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	104.6	743.2	334.5	1,109.9	594.3	94.8	2,981.3
70%	Net-To-Gross Adjustment (kW)	-31.4	-225.0	-100.4	-333.0	-178.3	-28.4	-894.4
	Net Adjusted Demand Reduction (kW)	73.2	520.2	234.2	777.0	416.0	66.4	2,086.9
	Planned Net Demand Reduction (kW)	490.2	274.7	366.7	479.0	218.5	0.0	1,829.1
	Annual % Toward Planned Net Reduction (kW)	15%	189%	64%	162%	190%	N/A	114%
	Avg. Gross Demand Reduction Per Participant (kW)	8.0	17.3	14.5	25.8	10	6	15
	Avg. Net Demand Reduction Per Participant (kW)	5.6	12.1	10.2	18.1	6.7	4	10
Program Performance	Annual \$Admin. per Participant (Gross)	\$270	\$278	\$432	\$327	\$360	\$290	\$332
	Annual \$Admin. per kWh/year (Gross)	\$0.01	\$0.00	\$0.01	\$0.00	\$0.01	\$0.01	\$0.00
	Annual \$Admin. per kW (Gross)	\$34	\$16	\$30	\$12.68	\$38	\$52	\$22
	Annual SEM&V per \$ Total	6.4%	1.8%	2.6%	2.5%	0.9%	11.4%	2.7%
	Annual \$Rebate per Participant (Gross)	\$5,260	\$7,742	\$8,251	\$4,310	\$5,205	\$4,286	\$3.9%

1. A participant is a unique account number.

The 2016 total gross deemed savings values reported in this table differs from values in the May 1, 2017 EM&V report, and have been refilled with the Commission. The adjustments totaled -481,137 kWh/year and 26 kW for 2016 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017, in section 9.1.1. The adjustment was to waste heat factors (WHF and WHFD) applied to lighting fixtures installed in 2016, where the program participant building HVAC systems was assumed to be heat pump heating and cooling systems, rather than the previous assumption of AC cool and non-electric heat systems. This adjustment was made in response to requests by the North Carolina Public Staff Utilities Commission Re: Docket No. E-22, Sub 545, on October 23, 2017. It is reflected in STEP Manual version 8.0.0 in this EM&V report.



P.39 North Carolina Non-Residential Window Film (DSM Phase III) Program 2015–2020

NC- Non-Residential Window Film Program		2015	2016	2017	2018	2019	2020	2015-2020
Category	Indicator	Total	Total	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate							
O&M (\$)	Direct Implementation							
O&M (\$)	Direct EM&V							
O&M (\$)	Indirect Other (Administrative)	\$851	\$799	\$870	\$984	\$344	\$92	\$3,941
Capital (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total	\$24,693	\$26,289	\$22,104	\$17,432	\$6,937	\$1,612	\$99,067
Costs (\$)	Planned	\$82,903	\$115,046	\$126,681	\$143,604	\$3,850	\$0	\$472,084
Costs (\$)	Variance	-\$58,211	-\$88,757	-\$104,577	-\$126,172	\$3,087	\$1,612	-\$373,018
	Annual % of Planned	30%	23%	17%	12%	180%	N/A	21%
Participants ¹	Total Participants	0	0	0	1	0		1
	Total Square Feet	0	0	0	402	0	0	402
	Planned Square Feet	48,000	76,742	91,659	95,900	0	0	312,301
	Variance	-48,000	-76,742	-91,659	-95,498	0	0	-311,899
	Annual % of Planned (Gross)	0%	0%	0%	0%	N/A	N/A	0%
Square feet	Total Square Feet	0	0	0	402	0	0	402
	North Facing	0	0	0	0	0	0	0
	East Facing	0	0	0	402	0	0	402
	West Facing	0	0	0	0	0	0	0
	South Facing	0	0	0	0	0	0	0
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	0	0	4,516	0	0	4,516
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	0	0	0	4,516	0	0	4,516
80%	Net-To-Gross Adjustment (kWh/yr)	0	0	0	-903	0	0	-903
	Net Adjusted Savings (kWh/yr)	0	0	0	3,613	0	0	3,613
	Planned Net Savings (kWh/yr)	864	1,064,075	1,016,658	691,176	0	0	2,772,773
	Annual % Toward Planned Net Savings (kWh)	0%	0%	0%	1%	N/A	N/A	0%
	Avg. Gross Savings Per Participant (kWh/yr)				4,516	N/A	N/A	4,516
	Avg. Gross Savings Per Square Foot (kWh/yr)				11	N/A	N/A	11
	Avg. Net Savings Per Participant (kWh/yr)				3,613	N/A	N/A	3,613
	Avg. Net Savings Per Square Foot (kWh/yr)				9	N/A	N/A	8.99
Installed kW	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.7	0	12	12.7
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0	0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.7	0	12	12.7
80%	Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	-0.1	0	-2	-2.5
	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.6	0	10	10.2
	Planned Net Demand Reduction (kW)	0.2	973.7	915.3	635.0	0	0	2,524.2
	Annual % Toward Planned Net Reduction (kW)	0%	0%	0%	0.1%	N/A	N/A	0.40%
	Avg. Gross Demand Reduction Per Participant (kW)				0.7	N/A	N/A	12.7
	Avg. Gross Demand Reduction Per Square Foot (kW)				0.002	N/A	N/A	0.032
	Avg. Net Demand Reduction Per Participant (kW)				0.6	N/A	N/A	10.2
	Avg. Net Demand Reduction Per Square Foot (kW)				0.001	N/A	N/A	0.025
Program Performance	Annual \$Admin. per Participant (Gross)			N/A	\$984.4	N/A	N/A	\$3,941
	Annual \$Admin. per kWh/year (Gross)			N/A	\$0.22	N/A	N/A	\$0.87
	Annual \$Admin. per kW (Gross)			N/A	\$1,337.1	N/A	\$15	\$309
	Annual \$EM&V per \$Total	18%	29%	25%	29%	51%	94%	28%
	Annual \$Rebate per Participant (Gross)			N/A	\$342	N/A	N/A	\$342

1. Program close end of 2019.
2. A participant is a unique account number.



P.40 North Carolina Residential Income and Age Qualifying Home Improvement Program 2016-2021

NC - Residential Income and Age Qualifying Home Improvement Program			2016	2017	2018	2019	2020	2021	2016-2021
Category	Measure	Indicator	Total	Total	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate							
O&M (\$)		Direct Implementation							
O&M (\$)		Direct EM&V							
O&M (\$)		Indirect Other (Administrative)	\$8,999	\$12,899	\$1,949	\$8,131	\$2,550	\$4,121	\$38,648
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$296,086	\$327,806	\$34,521	\$205,018	\$47,525	\$87,883	\$998,841
Costs (\$)		Planned	\$393,347	\$306,440	\$152,200	\$268,230	\$278,271	\$138,911	\$1,537,398
Costs (\$)		Variance	-\$97,261	\$21,366	-\$117,679	-\$63,211	-\$230,745	-\$51,027	-\$538,557
		Annual % of Planned	75%	107%	23%	76%	17%	63%	65%
Participants ¹		Total (Gross)	157	130	1	132	19	69	508
		Planned	257	254	0	282	282	120	1,195
		Variance	-100	-124	1	-150	-263	-51	-687
		Annual % of Planned (Gross)	61%	51%	N/A	47%	7%	58%	43%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	106,379	110,101	723	64,879	8,237	13,966	304,286
		Realization Rate Weighted by Measure	105%	105%	105%	105%	105%	100%	105%
		Realization Rate Adjustment (kWh/yr)	5,319	5,505	36	3,244	412	0	14,516
		Realization Rate Adjusted Savings (kWh/yr)	111,698	115,606	759	68,123	8,649	13,966	318,802
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	80%	99%
		Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	-2,793	-2,793
		Net Adjusted Savings (kWh/yr)	111,698	115,606	759	68,123	8,649	11,173	316,009
		Planned Net Savings (kWh/yr)	67,040	51,199	0	48,691	141,759	44,544	353,233
		Annual % Toward Planned Net Savings	166.6%	225.8%	N/A	139.9%	6.10%	25.1%	89.5%
		Avg. Gross Savings Per Participant (kWh/yr)	678	847	723	492	434	202	599
		Avg. Net Savings Per Participant (kWh/yr)	711	889	759	516	455	162	622
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	10.6	9.1	0.1	18.9	2.9	2.3	43.9
		Realization Rate Weighted by Measure	105%	105%	105%	105%	105%	100%	105%
		Realization Rate Adjustment (kW)	0.5	0.5	0.0	0.9	0.1	0.0	2.1
		Realization Rate Adjusted Gross Demand Reduction (kW)	11.2	9.6	0.1	19.8	3.0	2.3	46.0
		Net-To-Gross Rate Weighted by Measure	100%	100%	100%	100%	100%	80%	99%
		Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	-0.5	-0.5
		Net Adjusted Demand Reduction (kW)	11.2	9.6	0.1	19.8	3.0	1.8	45.5
		Planned Net Savings (kW)	15.0	11.4	0.0	5.1	13.7	8.6	53.8
		Annual % Toward Planned Net Reduction	74.3%	84.3%	N/A	393.0%	22.0%	21.4%	84.6%
		Avg. Gross Demand Reduction Per Participant (kW)	0.07	0.07	0.06	0.1	0.2	0.03	0.09
		Avg. Net Demand Reduction Per Participant (kW)	0.07	0.07	0.06	0.2	0.2	0.03	0.09
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	3.8	3.8
		Realization Rate Weighted by Measure	-	-	-	-	-	-	100%
		Realization Rate Adjustment (kW)	-	-	-	-	-	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	3.8	3.8
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	80%	80%
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-0.8	-0.8
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	3.1	3.1
		Planned Net Savings (kW)	-	-	-	-	-	0.0	0.0
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	N/A
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	0.06	0.06
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	0.04	0.04
Measures									
Program Performance		Cum. \$Admin. per Participant (Gross)	\$57	\$76	\$83	\$76	\$79	\$76	\$76
		Cum. \$Admin. per kWh/year (Gross)	\$0.08	\$0	\$0	\$0	\$0	\$0	\$0
		Cum. \$Admin. per kW (Gross)	\$847	\$1,108	\$1,203	\$826	\$830	\$880	\$880
		Cum. \$EM&V per \$Total	2.0%	2.2%	3.0%	3.0%	3.5%	4.0%	4.0%
		Cum. \$Rebate per Participant (Gross)	\$1,442	\$1,667	\$1,667	\$1,508	\$1,487	\$1,401	\$1,401



P.41 North Carolina Non-Residential Small Business Improvement Program 2016–2021

NC - Non-Residential Small Business Improvement Program			2016	2017	2018	2019	2020	2021	2022	2016-2021
Category	Measure	Indicator	Total	Total	Total	Total	Total	Total	Total	Total
O&M (\$)		Direct Rebate								
O&M (\$)		Direct Implementation								
O&M (\$)		Direct EM&V								
O&M (\$)		Indirect Other (Administrative)	\$0	\$3,870	\$10,216	\$7,730	\$6,786	\$3,131	\$218	\$31,733
Capital (\$)		Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)		Total	\$0	\$98,352	\$180,923	\$156,020	\$125,394	\$66,777	\$5,210	\$627,467
Costs (\$)		Planned	\$0	\$350,873	\$420,342	\$498,047	\$556,969	\$40,025	\$0	\$1,866,257
Costs (\$)		Variance	\$0	-\$252,521	-\$239,419	-\$342,027	-\$431,575	\$26,752	\$5,210	-\$1,238,790
		Annual % of Planned	N/A	28%	43%	31%	23%	167%	N/A	34%
Participants ¹		Total (Gross)	0	7	36	27	17	7	0	94
		Planned	0	42	53	62	72	0	0	229
		Variance	0	-35	-17	-35	-55	7	0	-135
		Annual % of Planned (Gross)	N/A	17%	68%	44%	24%	N/A	N/A	41%
Installed kWh/year	Total	Total Gross Energy Savings (kWh/yr)	0	166,507	1,000,716	695,521	380,315	206,514	0	2,449,573
		Realization Rate Weighted by Measure	N/A	100%	100%	100%	100%	100%	N/A	100%
		Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0
		Realization Rate Adjusted Savings (kWh/yr)	0	166,507	1,000,716	695,521	380,315	206,514	0	2,449,573
		Net-To-Gross Rate Weighted by Measure	N/A	93%	93%	93%	93%	93%	N/A	93%
		Net-To-Gross Adjustment (kWh/yr)	0	-11,655	-70,050	-48,686	-26,622	-14,456	0	-171,470
		Net Adjusted Savings (kWh/yr)	0	154,851	930,665	646,835	353,693	192,058	0	2,278,103
		Planned Net Savings (kWh/yr)	0	288,232	384,890	653,054	1,976,344	0	0	3,302,520
		Annual % Toward Planned Net Savings	N/A	53.7%	241.8%	99.0%	17.9%	N/A	N/A	69.0%
		Avg. Gross Savings Per Participant (kWh/yr)	N/A	23,787	27,798	25,760	22,371	29,502	N/A	26,059
		Avg. Net Savings Per Participant (kWh/yr)	N/A	22,122	25,852	23,957	20,805	27,437	N/A	24,235
Installed Summer peak kW	Total	Total Gross Demand Reduction (kW)	0.0	32.6	219.1	140.2	50.5	25.0	0.0	467.4
		Realization Rate Weighted by Measure	N/A	100%	100%	100%	100%	100%	N/A	100%
		Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	32.6	219.1	140.2	50.5	25.0	0.0	467.4
		Net-To-Gross Rate Weighted by Measure	N/A	93%	93%	93%	93%	93%	N/A	93%
		Net-To-Gross Adjustment (kW)	0.0	-2.3	-15.3	-9.8	-3.5	-1.7	0.0	-32.7
		Net Adjusted Demand Reduction (kW)	0.0	30.3	203.8	130.4	46.9	23.2	0.0	434.7
		Planned Net Savings (kW)	0.0	43.7	76.0	129.0	370.5	0.0	0.0	619.2
		Annual % Toward Planned Net Reduction	N/A	69.4%	268.2%	101.1%	12.7%	N/A	N/A	70.2%
		Avg. Gross Demand Reduction Per Participant (kW)	N/A	4.7	6.1	5.2	3.0	3.6	N/A	5.0
		Avg. Net Demand Reduction Per Participant (kW)	N/A	4.3	5.7	4.8	2.8	3.3	N/A	4.6
Installed Winter peak kW	Total	Total Gross Demand Reduction (kW)	-	-	-	-	-	29.5	-	29.5
		Realization Rate Weighted by Measure	-	-	-	-	-	100%	-	100%
		Realization Rate Adjustment (kW)	-	-	-	-	-	0.0	-	0.0
		Realization Rate Adjusted Gross Demand Reduction (kW)	-	-	-	-	-	29.5	-	29.5
		Net-To-Gross Rate Weighted by Measure	-	-	-	-	-	93%	-	93%
		Net-To-Gross Adjustment (kW)	-	-	-	-	-	-2.1	-	-2.1
		Net Adjusted Demand Reduction (kW)	-	-	-	-	-	27.5	-	27.5
		Planned Net Savings (kW)	-	-	-	-	-	0.0	-	0.0
		Annual % Toward Planned Net Reduction	-	-	-	-	-	-	-	N/A
		Avg. Gross Demand Reduction Per Participant (kW)	-	-	-	-	-	4.2	-	4.2
		Avg. Net Demand Reduction Per Participant (kW)	-	-	-	-	-	3.9	-	3.9
Measures										
Program Performance		Cum. \$Admin. per Participant (Gross)	N/A	\$553	\$328	\$312	\$329	\$338	\$340	\$338
		Cum. \$Admin. per kWh/year (Gross)	N/A	\$0.02	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01
		Cum. \$Admin. per kW (Gross)	N/A	\$119	\$56	\$56	\$65	\$68	\$68	\$68
		Cum. \$EM&V per \$Total	N/A	7.4%	5.1%	4.4%	4.7%	5.7%	6.5%	5.7%
		Cum. \$Rebate per Participant (Gross)	N/A	\$3,778	\$2,951	\$2,989	\$3,009	\$3,147	\$3,147	\$3,147



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	1	Residential Smart Cooling Reward	AC01	2010	31,368	31,368	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2011	304,052	335,420	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2012	655,989	991,409	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2013	961,244	1,952,653	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2014	1,264,777	3,217,430	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2015	1,539,774	4,757,204	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2016	1,741,552	6,498,756	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2017	1,779,624	8,278,380	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2018	1,807,521	10,085,901	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2019	1,842,162	11,928,063	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2020	1,863,938	13,792,001	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2021	1,871,675	15,663,676	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2022	156,224	15,819,900	0	0	0	0	0	0
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2022	3	3	2,012,197	2,012,197	1,951,831	1,951,831	4,016	3,896
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2023	0	3	19,922,372	21,934,569	19,324,701	21,276,532	8,106	7,863
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2024	0	3	19,921,666	41,856,236	19,324,016	40,600,548	8,089	7,847
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2025	0	3	19,922,374	61,778,610	19,324,703	59,925,251	8,094	7,851
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2026	0	3	19,922,375	81,700,984	19,324,703	79,249,955	8,094	7,851
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2027	0	3	19,923,084	101,624,069	19,325,392	98,575,347	8,120	7,876
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2028	0	3	19,922,372	121,546,440	19,324,701	117,900,047	8,115	7,872
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2029	0	3	19,921,666	141,468,106	19,324,016	137,224,063	8,093	7,850
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2030	0	3	19,922,374	161,390,481	19,324,703	156,548,766	8,094	7,851
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2031	0	3	19,922,374	181,312,855	19,324,703	175,873,469	8,094	7,851
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2032	0	3	18,951,321	200,264,176	18,382,782	194,256,251	8,102	7,859
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2033	0	3	9,961,186	210,225,363	9,662,351	203,918,602	4,060	3,938
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2034	0	3	9,961,186	220,186,549	9,662,351	213,580,952	4,053	3,932
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2035	0	3	9,960,833	230,147,382	9,662,008	223,242,960	4,047	3,925
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2036	0	3	9,961,187	240,108,569	9,662,351	232,905,312	4,051	3,930
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2037	0	3	9,961,187	250,069,756	9,662,352	242,567,664	4,047	3,925
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2038	0	3	9,961,542	260,031,299	9,662,696	252,230,360	4,060	3,938
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2039	0	3	9,961,186	269,992,485	9,662,351	261,892,710	4,060	3,938
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2040	0	3	9,960,832	279,953,317	9,662,007	271,554,718	4,051	3,930
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2041	0	3	9,961,187	289,914,504	9,662,351	281,217,069	4,047	3,925
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2042	0	3	8,990,414	298,904,918	8,720,702	289,937,771	4,047	3,925
Non-Residential	9	Non-Residential Building Optimization	CBOT	2022	2	2	128,733	128,733	115,859	115,859	589	530
Non-Residential	9	Non-Residential Building Optimization	CBOT	2023	0	2	1,797,877	1,926,610	1,618,089	1,733,949	1,079	971
Non-Residential	9	Non-Residential Building Optimization	CBOT	2024	0	2	1,797,888	3,724,498	1,618,099	3,352,048	1,079	971
Non-Residential	9	Non-Residential Building Optimization	CBOT	2025	0	2	1,797,877	5,522,375	1,618,090	4,970,138	1,079	971
Non-Residential	9	Non-Residential Building Optimization	CBOT	2026	0	2	1,797,877	7,320,252	1,618,090	6,588,227	1,079	971
Non-Residential	9	Non-Residential Building Optimization	CBOT	2027	0	2	1,673,739	8,993,992	1,506,365	8,094,592	1,080	972
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2012	11	11	5,424	5,424	4,577	4,577	20	17
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2013	357	368	449,711	455,135	379,511	384,089	407	343
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2014	1,700	2,068	11,780,773	12,235,908	9,941,794	10,325,883	6,731	5,680
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2015	1,655	3,723	40,443,873	52,679,781	34,130,584	44,456,467	16,598	14,007
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2016	640	4,363	64,220,614	116,900,395	54,195,776	98,652,243	27,170	22,929
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2017	81	4,444	80,738,117	197,638,512	68,134,897	166,787,140	32,146	27,128
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2018	0	4,444	81,403,461	279,041,973	68,696,381	235,483,521	32,131	27,115
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2019	0	4,444	81,404,797	360,446,770	68,697,508	304,181,029	32,135	27,119
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2020	0	4,444	81,404,827	441,851,597	68,697,534	372,878,563	32,107	27,095
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2021	0	4,444	81,406,136	523,257,733	68,698,638	441,577,200	32,193	27,168
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2022	0	4,444	81,404,792	604,662,525	68,697,504	510,274,705	32,189	27,164
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2023	0	4,444	81,404,803	686,067,327	68,697,513	578,972,217	32,146	27,128
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2024	0	4,444	81,403,461	767,470,789	68,696,381	647,668,598	32,128	27,113
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2025	0	4,444	81,404,802	848,875,591	68,697,513	716,366,111	32,126	27,111
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2026	0	4,444	81,404,822	930,280,412	68,697,529	785,063,640	32,115	27,102
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2027	0	4,444	81,406,132	1,011,686,545	68,698,635	853,762,275	32,193	27,168
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2028	0	4,444	81,404,796	1,093,091,341	68,697,507	922,459,783	32,163	27,142
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2029	0	4,444	81,403,464	1,174,494,805	68,696,383	991,156,166	32,131	27,115
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2030	0	4,444	81,404,801	1,255,899,605	68,697,511	1,059,853,677	32,135	27,119
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2031	0	4,444	81,404,808	1,337,304,414	68,697,518	1,128,551,195	32,126	27,111
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2032	0	4,444	81,406,161	1,418,710,574	68,698,659	1,197,249,854	32,136	27,120
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2033	0	4,444	81,404,783	1,500,115,358	68,697,497	1,265,947,351	32,189	27,164
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2034	0	4,444	81,404,804	1,581,520,162	68,697,514	1,334,644,865	32,146	27,128



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	1	Residential Smart Cooling Reward	AC01	2010	0	0	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2011	2,202	2,202	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2012	30,962	33,164	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2013	40,300	73,464	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2014	55,326	128,790	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2015	65,681	194,471	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2016	69,088	263,559	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2017	70,451	334,010	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2018	71,268	405,278	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2019	73,287	478,565	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2020	75,255	553,820	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2021	75,401	629,221	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2022	6,287	635,508	0	0	0	0	0	0
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2040	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2041	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2042	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Building Optimization	CBOT	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Building Optimization	CBOT	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Building Optimization	CBOT	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Building Optimization	CBOT	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Building Optimization	CBOT	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Building Optimization	CBOT	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2012	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2013	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2014	60	60	71,583	71,583	60,409	60,409	157	132
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2015	152	212	2,216,105	2,287,688	1,870,171	1,930,580	1,194	1,007
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2016	33	245	3,208,820	5,496,508	2,707,923	4,638,503	1,363	1,150
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2017	5	250	3,658,170	9,154,678	3,087,130	7,725,633	1,524	1,286
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2018	0	250	3,731,012	12,885,691	3,148,601	10,874,234	1,523	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2019	0	250	3,731,072	16,616,762	3,148,651	14,022,886	1,523	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2020	0	250	3,731,073	20,347,835	3,148,653	17,171,538	1,522	1,284
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2021	0	250	3,731,131	24,078,967	3,148,702	20,320,240	1,526	1,288
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2022	0	250	3,731,072	27,810,038	3,148,651	23,468,891	1,526	1,288
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2023	0	250	3,731,072	31,541,110	3,148,652	26,617,543	1,524	1,286
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2024	0	250	3,731,012	35,272,123	3,148,601	29,766,144	1,523	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2025	0	250	3,731,072	39,003,195	3,148,652	32,914,796	1,523	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2026	0	250	3,731,073	42,734,268	3,148,652	36,063,448	1,522	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2027	0	250	3,731,131	46,465,399	3,148,702	39,212,150	1,526	1,288
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2028	0	250	3,731,072	50,196,470	3,148,651	42,360,801	1,524	1,286
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2029	0	250	3,731,013	53,927,483	3,148,601	45,509,403	1,523	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2030	0	250	3,731,072	57,658,555	3,148,652	48,658,054	1,523	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2031	0	250	3,731,072	61,389,627	3,148,652	51,806,706	1,523	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2032	0	250	3,731,132	65,120,759	3,148,703	54,955,409	1,523	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2033	0	250	3,731,071	68,851,831	3,148,651	58,104,060	1,526	1,288
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2034	0	250	3,731,072	72,582,903	3,148,652	61,252,712	1,524	1,286



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	1	Residential Smart Cooling Reward	AC01	2010	31,368	31,368	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2011	306,254	337,622	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2012	686,951	1,024,573	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2013	1,001,544	2,026,117	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2014	1,320,103	3,346,220	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2015	1,605,455	4,951,675	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2016	1,810,640	6,762,315	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2017	1,850,075	8,612,390	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2018	1,878,789	10,491,179	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2019	1,915,449	12,406,628	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2020	1,939,193	14,345,821	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2021	1,947,076	16,292,897	0	0	0	0	0	0
Residential	1	Residential Smart Cooling Reward	AC01	2022	162,511	16,455,408	0	0	0	0	0	0
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2022	3	3	2,012,197	2,012,197	1,951,831	1,951,831	4,016	3,896
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2023	0	3	19,922,372	21,934,569	19,324,701	21,276,532	8,106	7,863
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2024	0	3	19,921,666	41,856,236	19,324,016	40,600,548	8,089	7,847
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2025	0	3	19,922,374	61,778,610	19,324,703	59,925,251	8,094	7,851
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2026	0	3	19,922,375	81,700,984	19,324,703	79,249,955	8,094	7,851
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2027	0	3	19,923,084	101,624,069	19,325,392	98,575,347	8,120	7,876
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2028	0	3	19,922,372	121,546,440	19,324,701	117,900,047	8,115	7,872
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2029	0	3	19,921,666	141,468,106	19,324,016	137,224,063	8,093	7,850
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2030	0	3	19,922,374	161,390,481	19,324,703	156,548,766	8,094	7,851
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2031	0	3	19,922,374	181,312,855	19,324,703	175,873,469	8,094	7,851
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2032	0	3	18,951,321	200,264,176	18,382,782	194,256,251	8,102	7,859
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2033	0	3	9,961,186	210,225,363	9,662,351	203,918,602	4,060	3,938
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2034	0	3	9,961,186	220,186,549	9,662,351	213,580,952	4,053	3,932
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2035	0	3	9,960,833	230,147,382	9,662,008	223,242,960	4,047	3,925
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2036	0	3	9,961,187	240,108,569	9,662,351	232,905,312	4,051	3,930
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2037	0	3	9,961,187	250,069,756	9,662,352	242,567,664	4,047	3,925
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2038	0	3	9,961,542	260,031,299	9,662,696	252,230,360	4,060	3,938
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2039	0	3	9,961,186	269,992,485	9,662,351	261,892,710	4,060	3,938
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2040	0	3	9,960,832	279,953,317	9,662,007	271,554,718	4,051	3,930
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2041	0	3	9,961,187	289,914,504	9,662,351	281,217,069	4,047	3,925
Non-Residential	9	Non-Residential Agricultural Energy Efficiency	CAGR	2042	0	3	8,990,414	298,904,918	8,720,702	289,937,771	4,047	3,925
Non-Residential	9	Non-Residential Building Optimization	CBOT	2022	2	2	128,733	128,733	115,859	115,859	589	530
Non-Residential	9	Non-Residential Building Optimization	CBOT	2023	0	2	1,797,877	1,926,610	1,618,089	1,733,949	1,079	971
Non-Residential	9	Non-Residential Building Optimization	CBOT	2024	0	2	1,797,888	3,724,498	1,618,099	3,352,048	1,079	971
Non-Residential	9	Non-Residential Building Optimization	CBOT	2025	0	2	1,797,877	5,522,375	1,618,090	4,970,138	1,079	971
Non-Residential	9	Non-Residential Building Optimization	CBOT	2026	0	2	1,797,877	7,320,252	1,618,090	6,588,227	1,079	971
Non-Residential	9	Non-Residential Building Optimization	CBOT	2027	0	2	1,673,739	8,993,992	1,506,365	8,094,592	1,080	972
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2012	11	11	5,424	5,424	4,577	4,577	20	17
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2013	357	368	449,711	455,135	379,511	384,089	407	343
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2014	1,760	2,128	11,852,356	12,307,491	10,002,203	10,386,292	6,887	5,812
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2015	1,807	3,935	42,659,978	54,967,468	36,000,755	46,387,047	17,792	15,014
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2016	673	4,608	67,429,434	122,396,903	56,903,700	103,290,746	28,533	24,079
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2017	86	4,694	84,396,287	206,793,190	71,222,027	174,512,773	33,670	28,414
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2018	0	4,694	85,134,474	291,927,663	71,844,982	246,357,755	33,654	28,401
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2019	0	4,694	85,135,869	377,063,532	71,846,160	318,203,915	33,658	28,404
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2020	0	4,694	85,135,900	462,199,432	71,846,186	390,050,101	33,628	28,379
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2021	0	4,694	85,137,267	547,336,699	71,847,340	461,897,441	33,719	28,455
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2022	0	4,694	85,135,864	632,472,563	71,846,155	533,743,596	33,715	28,452
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2023	0	4,694	85,135,874	717,608,438	71,846,164	605,589,760	33,670	28,414
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2024	0	4,694	85,134,474	802,742,911	71,844,982	677,434,743	33,651	28,398
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2025	0	4,694	85,135,874	887,878,785	71,846,164	749,280,907	33,649	28,396
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2026	0	4,694	85,135,894	973,014,680	71,846,181	821,127,088	33,638	28,387
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2027	0	4,694	85,137,264	1,058,151,944	71,847,337	892,974,425	33,719	28,455
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2028	0	4,694	85,135,868	1,143,287,811	71,846,159	964,820,584	33,687	28,429
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2029	0	4,694	85,134,476	1,228,422,288	71,844,985	1,036,665,569	33,654	28,401
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2030	0	4,694	85,135,873	1,313,558,160	71,846,163	1,108,511,731	33,658	28,404
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2031	0	4,694	85,135,880	1,398,694,041	71,846,169	1,180,357,901	33,649	28,396
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2032	0	4,694	85,137,293	1,483,831,334	71,847,362	1,252,205,263	33,659	28,405
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2033	0	4,694	85,135,855	1,568,967,189	71,846,148	1,324,051,411	33,715	28,452
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2034	0	4,694	85,135,876	1,654,103,065	71,846,166	1,395,897,576	33,670	28,414



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2035	0	4,444	81,403,462	1,662,923,624	68,696,381	1,403,341,246	32,131	27,115
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2036	0	4,444	81,404,798	1,744,328,421	68,697,509	1,472,038,755	32,138	27,121
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2037	0	4,444	81,399,422	1,825,727,843	68,692,972	1,540,731,727	32,115	27,102
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2038	0	4,431	80,961,108	1,906,688,951	68,323,079	1,609,054,805	32,106	27,094
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2039	0	4,056	69,705,532	1,976,394,483	58,824,498	1,667,879,304	28,297	23,880
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2040	0	2,280	41,037,413	2,017,431,896	34,631,473	1,702,510,777	17,394	14,679
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2041	0	675	17,297,542	2,034,729,438	14,597,396	1,717,108,173	12,737	10,749
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2042	0	40	713,578	2,035,443,016	602,188	1,717,710,361	6,315	5,329
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2021	7	7	6,552	6,552	5,897	5,897	8	7
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2022	113	120	431,256	437,808	388,130	394,027	621	559
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2023	0	120	1,689,893	2,127,700	1,520,904	1,914,930	1,042	938
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2024	0	120	1,689,818	3,817,518	1,520,836	3,435,766	1,045	940
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2025	0	120	1,689,894	5,507,412	1,520,904	4,956,671	1,042	938
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2026	0	120	1,689,894	7,197,306	1,520,904	6,477,575	1,037	933
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2027	0	120	1,689,969	8,887,275	1,520,972	7,998,547	1,046	942
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2028	0	120	1,689,893	10,577,168	1,520,904	9,519,451	1,042	938
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2029	0	120	1,689,818	12,266,985	1,520,836	11,040,287	1,044	939
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2030	0	120	1,689,893	13,956,879	1,520,904	12,561,191	1,045	940
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2031	0	120	1,689,894	15,646,772	1,520,904	14,082,095	1,042	938
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2032	0	120	1,689,970	17,336,742	1,520,973	15,603,068	1,038	934
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2033	0	120	1,683,672	19,020,414	1,515,305	17,118,373	1,046	942
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2034	0	111	1,476,985	20,497,399	1,329,286	18,447,659	1,014	912
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2035	0	10	1,227,668	21,725,067	1,104,901	19,552,561	946	851
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2036	0	10	1,227,742	22,952,809	1,104,968	20,657,529	945	850
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2037	0	10	1,227,079	24,179,888	1,104,371	21,761,900	939	845
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2038	0	10	1,224,516	25,404,404	1,102,064	22,863,964	947	852
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2039	0	10	1,224,441	26,628,845	1,101,997	23,965,961	947	853
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2040	0	10	1,224,367	27,853,213	1,101,930	25,067,891	946	851
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2041	0	10	1,224,441	29,077,654	1,101,997	26,169,889	947	852
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2042	0	10	1,224,442	30,302,096	1,101,997	27,271,886	944	849
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2043	0	10	1,224,442	31,526,537	1,101,998	28,373,883	939	845
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2044	0	10	1,224,165	32,750,702	1,101,749	29,475,632	940	846
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2014	6	6	100,563	100,563	70,394	70,394	286	200
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2015	114	120	6,592,799	6,693,361	4,614,959	4,685,353	3,356	2,349
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2016	89	209	18,412,560	25,105,921	12,888,792	17,574,145	8,136	5,695
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2017	103	312	29,535,473	54,641,394	20,674,831	38,248,976	11,813	8,269
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2018	77	389	37,501,938	92,143,332	26,251,357	64,500,333	14,292	10,004
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2019	17	406	45,987,825	138,131,157	32,191,478	96,691,810	17,314	12,120
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2020	0	406	46,906,420	185,037,578	32,834,494	129,526,304	18,222	12,755
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2021	0	406	46,906,651	231,944,229	32,834,656	162,360,960	18,298	12,808
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2022	0	406	46,906,395	278,850,623	32,834,476	195,195,436	18,298	12,809
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2023	0	406	46,906,407	325,757,030	32,834,485	228,029,921	18,268	12,788
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2024	0	406	46,906,143	372,663,174	32,834,300	260,864,222	18,228	12,759
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2025	0	406	46,906,405	419,569,579	32,834,484	293,698,705	18,228	12,759
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2026	0	406	46,906,412	466,475,991	32,834,489	326,533,194	18,233	12,763
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2027	0	406	46,906,652	513,382,644	32,834,657	359,367,850	18,298	12,808
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2028	0	406	46,906,397	560,289,041	32,834,478	392,202,328	18,289	12,802
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2029	0	406	46,808,100	607,097,141	32,765,670	424,967,998	18,239	12,768
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2030	0	400	40,346,642	647,443,783	28,242,650	453,210,648	17,858	12,500
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2031	0	287	28,552,087	675,995,870	19,986,461	473,197,109	15,600	10,920
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2032	0	201	17,384,708	693,380,578	12,169,295	485,366,404	13,002	9,102
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2033	0	99	9,410,859	702,791,437	6,587,601	491,954,006	8,697	6,088
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2034	0	14	924,883	703,716,320	647,418	492,601,424	3,133	2,193
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2020	30	30	804,164	804,164	562,915	562,915	2,304	1,613
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2021	44	74	2,587,565	3,391,728	1,811,295	2,374,210	2,909	2,036
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2022	51	125	5,549,136	8,940,865	3,884,395	6,258,605	10,686	7,480
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2023	0	125	13,236,316	22,177,181	9,265,421	15,524,027	16,291	11,404
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2024	0	125	13,237,431	35,414,612	9,266,202	24,790,229	16,239	11,367
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2025	0	125	13,236,320	48,650,932	9,265,424	34,055,652	16,239	11,367
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2026	0	125	13,236,317	61,887,249	9,265,422	43,321,075	16,253	11,377
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2027	0	125	13,235,207	75,122,457	9,264,645	52,585,720	16,298	11,409
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2028	0	125	13,236,304	88,358,761	9,265,413	61,851,133	16,318	11,422
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2029	0	125	13,237,435	101,596,196	9,266,205	71,117,337	16,254	11,377
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2030	0	125	13,236,318	114,832,514	9,265,423	80,382,760	16,252	11,377
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2031	0	125	13,236,324	128,068,838	9,265,426	89,648,186	16,239	11,367
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2032	0	125	13,235,211	141,304,049	9,264,648	98,912,834	16,281	11,396



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2035	0	250	3,731,013	76,313,915	3,148,601	64,401,313	1,523	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2036	0	250	3,731,072	80,044,987	3,148,651	67,549,965	1,523	1,286
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2037	0	250	3,731,073	83,776,060	3,148,652	70,698,617	1,522	1,285
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2038	0	250	3,731,131	87,507,191	3,148,702	73,847,319	1,526	1,288
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2039	0	250	3,660,525	91,167,717	3,089,117	76,936,436	1,526	1,288
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2040	0	178	1,524,167	92,691,884	1,286,245	78,222,681	999	843
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2041	0	38	525,222	93,217,107	443,235	78,665,916	422	356
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2042	0	2	73,488	93,290,594	62,016	78,727,933	292	246
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2040	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2041	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2042	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2043	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2044	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2014	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2015	3	3	66,050	66,050	46,235	46,235	37	26
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2016	6	9	270,357	336,407	189,250	235,485	157	110
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2017	3	12	422,453	758,860	295,717	531,202	177	124
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2018	3	15	601,940	1,360,800	421,358	952,560	291	204
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2019	1	16	733,278	2,094,078	513,294	1,465,855	347	243
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2020	0	16	772,477	2,866,555	540,734	2,006,588	407	285
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2021	0	16	772,498	3,639,053	540,749	2,547,337	409	286
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2022	0	16	772,477	4,411,530	540,734	3,088,071	409	286
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2023	0	16	772,477	5,184,006	540,734	3,628,804	408	286
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2024	0	16	772,455	5,956,461	540,719	4,169,523	407	285
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2025	0	16	772,477	6,728,938	540,734	4,710,257	407	285
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2026	0	16	772,477	7,501,415	540,734	5,250,991	407	285
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2027	0	16	772,498	8,273,913	540,749	5,791,739	409	286
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2028	0	16	772,476	9,046,390	540,734	6,332,473	408	286
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2029	0	16	772,455	9,818,845	540,719	6,873,191	407	285
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2030	0	16	706,703	10,525,548	494,692	7,367,883	407	285
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2031	0	13	503,533	11,029,081	352,473	7,720,357	391	274
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2032	0	9	350,158	11,379,238	245,110	7,965,467	321	224
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2033	0	6	170,567	11,549,805	119,397	8,084,864	289	202
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2034	0	3	39,387	11,589,192	27,571	8,112,434	66	46
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2020	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2021	1	1	1,159	1,159	811	811	4	3
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2022	1	2	47,221	48,380	33,055	33,866	156	109
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2023	0	2	142,503	190,883	99,752	133,618	186	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2024	0	2	142,490	333,373	99,743	233,361	184	129
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2025	0	2	142,503	475,875	99,752	333,113	185	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2026	0	2	142,503	618,378	99,752	432,865	186	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2027	0	2	142,516	760,895	99,761	532,626	186	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2028	0	2	142,503	903,397	99,752	632,378	185	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2029	0	2	142,490	1,045,887	99,743	732,121	186	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2030	0	2	142,503	1,188,390	99,752	831,873	186	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2031	0	2	142,503	1,330,893	99,752	931,625	185	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2032	0	2	142,516	1,473,409	99,761	1,031,387	185	129



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2035	0	4,694	85,134,474	1,739,237,539	71,844,983	1,467,742,559	33,654	28,401
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2036	0	4,694	85,135,870	1,824,373,408	71,846,160	1,539,588,719	33,661	28,407
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2037	0	4,694	85,130,495	1,909,503,903	71,841,625	1,611,430,344	33,638	28,387
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2038	0	4,681	84,692,239	1,994,196,142	71,471,780	1,682,902,124	33,632	28,382
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2039	0	4,306	73,366,057	2,067,562,199	61,913,616	1,744,815,740	29,823	25,167
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2040	0	2,458	42,561,581	2,110,123,780	35,917,718	1,780,733,458	18,393	15,522
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2041	0	713	17,822,764	2,127,946,545	15,040,631	1,795,774,089	13,158	11,104
Non-Residential	2	Non-Residential Duct Testing and Sealing	CDUC	2042	0	42	787,065	2,128,733,610	664,204	1,796,438,293	6,606	5,575
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2021	7	7	6,552	6,552	5,897	5,897	8	7
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2022	113	120	431,256	437,808	388,130	394,027	621	559
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2023	0	120	1,689,893	2,127,700	1,520,904	1,914,930	1,042	938
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2024	0	120	1,689,818	3,817,518	1,520,836	3,435,766	1,045	940
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2025	0	120	1,689,894	5,507,412	1,520,904	4,956,671	1,042	938
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2026	0	120	1,689,894	7,197,306	1,520,904	6,477,575	1,037	933
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2027	0	120	1,689,969	8,887,275	1,520,972	7,998,547	1,046	942
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2028	0	120	1,689,893	10,577,168	1,520,904	9,519,451	1,042	938
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2029	0	120	1,689,818	12,266,985	1,520,836	11,040,287	1,044	939
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2030	0	120	1,689,893	13,956,879	1,520,904	12,561,191	1,045	940
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2031	0	120	1,689,894	15,646,772	1,520,904	14,082,095	1,042	938
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2032	0	120	1,689,970	17,336,742	1,520,973	15,603,068	1,038	934
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2033	0	120	1,683,672	19,020,414	1,515,305	17,118,373	1,046	942
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2034	0	111	1,476,985	20,497,399	1,329,286	18,447,659	1,014	912
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2035	0	10	1,227,668	21,725,067	1,104,901	19,552,561	946	851
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2036	0	10	1,227,742	22,952,809	1,104,968	20,657,529	945	850
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2037	0	10	1,227,079	24,179,888	1,104,371	21,761,900	939	845
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2038	0	10	1,224,516	25,404,404	1,102,064	22,863,964	947	852
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2039	0	10	1,224,441	26,628,845	1,101,997	23,965,961	947	853
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2040	0	10	1,224,367	27,853,213	1,101,930	25,067,891	946	851
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2041	0	10	1,224,441	29,077,654	1,101,997	26,169,889	947	852
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2042	0	10	1,224,442	30,302,096	1,101,997	27,271,886	944	849
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2043	0	10	1,224,442	31,526,537	1,101,998	28,373,883	939	845
Non-Residential	8	Non-Residential Midstream Energy Efficiency Products	CEEP	2044	0	10	1,224,165	32,750,702	1,101,749	29,475,632	940	846
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2014	6	6	100,563	100,563	70,394	70,394	286	200
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2015	117	123	6,658,849	6,759,411	4,661,194	4,731,588	3,393	2,375
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2016	95	218	18,682,917	25,442,328	13,078,042	17,809,630	8,293	5,805
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2017	106	324	29,957,926	55,400,255	20,970,548	38,780,178	11,990	8,393
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2018	80	404	38,103,878	93,504,133	26,672,715	65,452,893	14,583	10,208
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2019	18	422	46,721,103	140,225,235	32,704,772	98,157,665	17,662	12,363
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2020	0	422	47,678,897	187,904,132	33,375,228	131,532,893	18,628	13,040
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2021	0	422	47,679,150	235,583,282	33,375,405	164,908,297	18,706	13,094
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2022	0	422	47,678,871	283,262,153	33,375,210	198,283,507	18,707	13,095
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2023	0	422	47,678,884	330,941,037	33,375,218	231,658,726	18,676	13,073
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2024	0	422	47,678,599	378,619,635	33,375,019	265,033,745	18,635	13,044
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2025	0	422	47,678,882	426,298,517	33,375,217	298,408,962	18,635	13,044
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2026	0	422	47,678,889	473,977,406	33,375,222	331,784,184	18,640	13,048
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2027	0	422	47,679,151	521,656,557	33,375,405	365,159,590	18,706	13,094
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2028	0	422	47,678,874	569,335,431	33,375,212	398,534,801	18,697	13,088
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2029	0	422	47,580,555	616,915,985	33,306,388	431,841,190	18,647	13,053
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2030	0	416	41,053,345	657,969,331	28,737,342	460,578,531	18,265	12,785
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2031	0	300	29,055,620	687,024,951	20,338,934	480,917,466	15,992	11,194
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2032	0	210	17,734,865	704,759,816	12,414,406	493,331,871	13,323	9,326
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2033	0	105	9,581,426	714,341,242	6,706,998	500,038,869	8,985	6,290
Non-Residential	3	Non-Residential Heating and Cooling Efficiency	CHV2	2034	0	17	964,270	715,305,511	674,989	500,713,858	3,199	2,239
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2020	30	30	804,164	804,164	562,915	562,915	2,304	1,613
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2021	45	75	2,588,723	3,392,887	1,812,106	2,375,021	2,913	2,039
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2022	52	127	5,596,358	8,989,244	3,917,450	6,292,471	10,842	7,589
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2023	0	127	13,378,819	22,368,063	9,365,173	15,657,644	16,477	11,534
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2024	0	127	13,379,921	35,747,985	9,365,945	25,023,589	16,423	11,496
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2025	0	127	13,378,823	49,126,807	9,365,176	34,388,765	16,425	11,497
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2026	0	127	13,378,820	62,505,628	9,365,174	43,753,939	16,439	11,507
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2027	0	127	13,377,724	75,883,351	9,364,406	53,118,346	16,485	11,539
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2028	0	127	13,378,807	89,262,158	9,365,165	62,483,511	16,503	11,552
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2029	0	127	13,379,925	102,642,083	9,365,947	71,849,458	16,439	11,507
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2030	0	127	13,378,821	116,020,904	9,365,175	81,214,633	16,438	11,506
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2031	0	127	13,378,827	129,399,731	9,365,179	90,579,812	16,425	11,497
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2032	0	127	13,377,727	142,777,458	9,364,409	99,944,221	16,465	11,526



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2033	0	125	13,236,307	154,540,356	9,265,415	108,178,249	16,304	11,413
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2034	0	125	13,236,317	167,776,673	9,265,422	117,443,671	16,291	11,404
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2035	0	125	12,440,809	180,217,482	8,708,566	126,152,237	16,254	11,377
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2036	0	93	10,651,335	190,868,817	7,455,935	133,608,172	13,523	9,466
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2037	0	49	7,707,894	198,576,711	5,395,526	139,003,698	12,811	8,968
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2010	28	28	381,568	381,568	73,188	73,188	414	95
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2011	59	87	7,878,452	8,260,021	1,927,994	2,001,182	4,124	1,066
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2012	36	123	22,285,924	30,545,945	5,545,151	7,546,333	10,415	2,536
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2013	0	123	23,944,486	54,490,431	5,825,372	13,371,705	10,412	2,536
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2014	0	123	23,944,486	78,434,917	5,825,372	19,197,077	10,409	2,535
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2015	0	123	23,944,488	102,379,404	5,825,372	25,022,449	10,405	2,534
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2016	0	123	23,944,658	126,324,063	5,825,413	30,847,862	10,410	2,535
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2017	0	123	23,944,486	150,268,548	5,825,372	36,673,233	10,414	2,536
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2018	0	123	23,944,316	174,212,864	5,825,331	42,498,564	10,410	2,535
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2019	0	123	23,944,485	198,157,349	5,825,371	48,323,935	10,412	2,536
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2020	0	123	23,944,492	222,101,841	5,825,373	54,149,308	10,403	2,533
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2021	0	123	23,944,657	246,046,498	5,825,413	59,974,721	10,430	2,540
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2022	0	123	23,944,483	269,990,981	5,825,371	65,800,092	10,428	2,540
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2023	0	123	23,944,486	293,935,467	5,825,372	71,625,464	10,414	2,536
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2024	0	123	23,944,315	317,879,782	5,825,331	77,450,794	10,410	2,535
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2025	0	123	23,568,790	341,448,572	5,753,382	83,204,177	10,409	2,535
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2026	0	92	16,112,103	357,560,674	3,908,315	87,112,491	6,824	1,687
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2027	0	30	1,685,528	359,246,203	284,765	87,397,257	1,314	215
Non-Residential	1	Commercial Lighting	CL	2010	399	399	3,721,777	3,721,777	3,323,130	3,323,130	3,302	2,942
Non-Residential	1	Commercial Lighting	CL	2011	1,307	1,706	32,967,905	36,689,681	29,315,396	32,638,526	13,173	11,713
Non-Residential	1	Commercial Lighting	CL	2012	703	2,409	72,212,127	108,901,808	64,203,089	96,841,615	20,326	18,079
Non-Residential	1	Commercial Lighting	CL	2013	0	2,409	79,454,581	188,356,389	70,672,134	167,513,749	20,325	18,079
Non-Residential	1	Commercial Lighting	CL	2014	0	2,409	79,454,571	267,810,960	70,672,125	238,185,875	20,325	18,078
Non-Residential	1	Commercial Lighting	CL	2015	0	2,409	79,454,573	347,265,533	70,672,128	308,858,002	20,325	18,079
Non-Residential	1	Commercial Lighting	CL	2016	0	2,409	79,457,607	426,723,140	70,674,828	379,532,830	20,353	18,103
Non-Residential	1	Commercial Lighting	CL	2017	0	2,409	79,454,562	506,177,702	70,672,117	450,204,947	20,366	18,115
Non-Residential	1	Commercial Lighting	CL	2018	0	2,409	79,451,537	585,629,239	70,669,425	520,874,372	20,324	18,078
Non-Residential	1	Commercial Lighting	CL	2019	0	2,409	79,454,569	665,083,808	70,672,123	591,546,496	20,325	18,079
Non-Residential	1	Commercial Lighting	CL	2020	0	2,409	75,764,415	740,848,223	67,377,188	658,923,684	20,274	18,033
Non-Residential	1	Commercial Lighting	CL	2021	0	1,959	46,628,498	787,476,720	41,482,782	700,406,465	15,930	14,165
Non-Residential	1	Commercial Lighting	CL	2022	0	547	7,314,681	794,791,401	6,533,453	706,939,918	5,875	5,230
Non-Residential	1	Commercial Lighting	CL	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	1	Commercial Lighting	CL	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2014	118	118	442,332	442,332	309,632	309,632	1,022	716
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2015	1,241	1,359	28,180,453	28,622,785	19,726,317	20,035,949	11,956	8,369
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2016	1,203	2,562	86,762,065	115,384,849	60,733,445	80,769,395	26,169	18,318
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2017	868	3,430	156,501,871	271,886,720	109,551,310	190,320,704	41,612	29,129
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2018	649	4,079	211,349,727	483,236,447	147,944,809	338,265,513	51,348	35,944
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2019	422	4,501	274,895,987	758,132,434	192,427,191	530,692,704	61,800	43,260
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2020	0	4,501	279,614,236	1,037,746,671	195,729,965	726,422,669	61,780	43,246
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2021	0	4,501	279,625,358	1,317,372,028	195,737,750	922,160,420	61,994	43,396
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2022	0	4,501	279,614,150	1,596,986,178	195,729,905	1,117,890,324	61,996	43,397
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2023	0	4,501	279,614,234	1,876,600,412	195,729,964	1,313,620,288	61,903	43,332
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2024	0	4,501	279,600,749	2,156,201,161	195,720,525	1,509,340,813	61,773	43,241
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2025	0	4,442	260,057,744	2,416,258,906	182,040,421	1,691,381,234	60,458	42,321
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2026	0	3,325	203,899,568	2,620,158,473	142,729,697	1,834,110,931	49,222	34,455
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2027	0	2,150	135,199,361	2,755,357,834	94,639,552	1,928,750,484	35,790	25,053
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2028	0	1,214	75,608,424	2,830,966,258	52,925,897	1,981,676,380	21,092	14,764
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2029	0	544	12,774,169	2,843,740,427	8,941,918	1,990,618,299	11,174	7,822
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2020	406	406	11,987,248	11,987,248	6,688,884	6,688,884	5,160	2,879
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2021	388	794	41,054,307	53,041,555	22,908,303	29,597,188	9,168	5,116
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2022	193	987	58,924,687	111,966,242	32,879,976	62,477,163	12,106	6,755
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2023	0	987	68,401,945	180,368,187	38,168,285	100,645,448	12,225	6,822
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2024	0	987	68,402,156	248,770,343	38,168,403	138,813,851	12,214	6,815
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2025	0	987	68,401,949	317,172,292	38,168,288	176,982,139	12,216	6,817
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2026	0	987	68,401,955	385,574,247	38,168,291	215,150,430	12,217	6,817
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2027	0	987	68,401,741	453,975,988	38,168,172	253,318,602	12,233	6,826



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2033	0	2	142,503	1,615,912	99,752	1,131,139	186	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2034	0	2	142,503	1,758,415	99,752	1,230,891	186	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2035	0	2	142,490	1,900,905	99,743	1,330,633	186	130
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2036	0	2	141,345	2,042,250	98,942	1,429,575	184	129
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2037	0	1	95,368	2,137,618	66,758	1,496,333	184	129
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2010	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2011	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2012	4	4	172,966	172,966	49,269	49,269	69	20
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2013	0	4	388,139	561,105	110,562	159,831	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2014	0	4	388,139	949,245	110,562	270,392	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2015	0	4	388,140	1,337,384	110,562	380,954	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2016	0	4	388,146	1,725,530	110,563	491,517	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2017	0	4	388,139	2,113,669	110,562	602,079	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2018	0	4	388,133	2,501,802	110,560	712,638	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2019	0	4	388,139	2,889,942	110,562	823,200	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2020	0	4	388,140	3,278,081	110,562	933,762	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2021	0	4	388,146	3,666,227	110,563	1,044,325	158	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2022	0	4	388,139	4,054,367	110,562	1,154,886	158	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2023	0	4	388,140	4,442,506	110,562	1,265,448	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2024	0	4	388,133	4,830,639	110,560	1,376,008	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2025	0	4	388,139	5,218,779	110,562	1,486,569	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2026	0	4	388,140	5,606,918	110,562	1,597,131	157	45
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2027	0	2	215,953	5,822,871	61,514	1,658,645	106	30
Non-Residential	1	Commercial Lighting	CL	2010	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	1	Commercial Lighting	CL	2011	1	1	25,801	25,801	22,834	22,834	459	407
Non-Residential	1	Commercial Lighting	CL	2012	25	26	2,006,695	2,032,496	1,777,120	1,799,954	577	512
Non-Residential	1	Commercial Lighting	CL	2013	0	26	2,197,216	4,229,712	1,946,806	3,746,760	600	532
Non-Residential	1	Commercial Lighting	CL	2014	21	47	2,501,535	6,731,246	2,216,128	5,962,888	761	674
Non-Residential	1	Commercial Lighting	CL	2015	0	47	3,092,867	9,824,114	2,739,457	8,702,345	823	729
Non-Residential	1	Commercial Lighting	CL	2016	0	47	3,092,878	12,916,991	2,739,467	11,441,812	824	730
Non-Residential	1	Commercial Lighting	CL	2017	0	47	3,092,867	16,009,858	2,739,457	14,181,268	825	731
Non-Residential	1	Commercial Lighting	CL	2018	0	47	3,092,856	19,102,714	2,739,447	16,920,716	823	729
Non-Residential	1	Commercial Lighting	CL	2019	0	47	3,092,867	22,195,581	2,739,457	19,660,173	823	729
Non-Residential	1	Commercial Lighting	CL	2020	0	47	3,092,868	25,288,449	2,739,458	22,399,631	823	729
Non-Residential	1	Commercial Lighting	CL	2021	0	47	3,072,952	28,361,401	2,721,833	25,121,463	827	732
Non-Residential	1	Commercial Lighting	CL	2022	0	45	1,086,961	29,448,362	963,041	26,084,504	324	287
Non-Residential	1	Commercial Lighting	CL	2023	0	21	895,651	30,344,013	792,651	26,877,155	230	204
Non-Residential	1	Commercial Lighting	CL	2024	0	21	594,469	30,938,482	526,105	27,403,260	229	203
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2014	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2015	13	13	138,366	138,366	96,856	96,856	122	85
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2016	43	56	2,154,246	2,292,612	1,507,972	1,604,828	855	598
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2017	23	79	4,861,288	7,153,899	3,402,901	5,007,730	1,234	864
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2018	43	122	6,926,548	14,080,448	4,848,584	9,856,313	2,338	1,636
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2019	62	184	12,803,131	26,883,578	8,962,192	18,818,505	3,009	2,107
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2020	17	201	14,352,710	41,236,288	10,046,897	28,865,402	3,171	2,220
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2021	0	201	14,439,863	55,676,152	10,107,904	38,973,306	3,182	2,227
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2022	0	201	14,439,837	70,115,989	10,107,886	49,081,192	3,182	2,228
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2023	0	201	14,439,837	84,555,826	10,107,886	59,189,078	3,177	2,224
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2024	0	201	14,439,813	98,995,638	10,107,869	69,296,947	3,171	2,220
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2025	0	201	14,393,152	113,388,791	10,075,206	79,372,153	3,172	2,220
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2026	0	190	12,816,791	126,205,582	8,971,754	88,343,907	3,045	2,131
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2027	0	151	9,918,584	136,124,166	6,943,009	95,286,916	2,370	1,659
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2028	0	126	8,005,674	144,129,840	5,603,972	100,890,888	1,939	1,357
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2029	0	86	2,538,572	146,668,412	1,777,000	102,667,888	1,512	1,058
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2030	0	20	199,732	146,868,143	139,812	102,807,700	155	108
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2020	9	9	57,137	57,137	31,882	31,882	20	11
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2021	5	14	204,313	261,450	114,007	145,889	54	30
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2022	12	26	642,060	903,510	358,270	504,159	312	174
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2023	0	26	1,780,386	2,683,896	993,455	1,497,614	315	176
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2024	0	26	1,780,394	4,464,290	993,460	2,491,074	315	176
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2025	0	26	1,780,386	6,244,676	993,455	3,484,529	315	176
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2026	0	26	1,780,386	8,025,062	993,455	4,477,984	315	176
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2027	0	26	1,780,378	9,805,440	993,451	5,471,435	315	176



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2033	0	127	13,378,810	156,156,268	9,365,167	109,309,388	16,490	11,543
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2034	0	127	13,378,820	169,535,088	9,365,174	118,674,562	16,477	11,534
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2035	0	127	12,583,298	182,118,387	8,808,309	127,482,871	16,439	11,507
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2036	0	95	10,792,680	192,911,067	7,554,876	135,037,747	13,708	9,595
Non-Residential	7	Non-Residential Heating and Cooling Efficiency	CHV3	2037	0	50	7,803,262	200,714,329	5,462,284	140,500,030	12,995	9,097
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2010	28	28	381,568	381,568	73,188	73,188	414	95
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2011	59	87	7,878,452	8,260,021	1,927,994	2,001,182	4,124	1,066
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2012	40	127	22,458,890	30,718,911	5,594,421	7,595,603	10,484	2,556
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2013	0	127	24,332,625	55,051,536	5,935,933	13,531,536	10,569	2,581
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2014	0	127	24,332,625	79,384,161	5,935,933	19,467,469	10,567	2,580
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2015	0	127	24,332,627	103,716,788	5,935,934	25,403,403	10,562	2,579
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2016	0	127	24,332,804	128,049,593	5,935,976	31,339,379	10,568	2,580
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2017	0	127	24,332,625	152,382,217	5,935,933	37,275,312	10,572	2,581
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2018	0	127	24,332,449	176,714,666	5,935,891	43,211,202	10,568	2,580
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2019	0	127	24,332,624	201,047,291	5,935,933	49,147,135	10,569	2,581
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2020	0	127	24,332,632	225,379,922	5,935,935	55,083,070	10,560	2,578
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2021	0	127	24,332,802	249,712,725	5,935,976	61,019,046	10,588	2,585
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2022	0	127	24,332,623	274,045,348	5,935,933	66,954,978	10,586	2,585
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2023	0	127	24,332,625	298,377,973	5,935,933	72,890,912	10,572	2,581
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2024	0	127	24,332,449	322,710,421	5,935,890	78,826,802	10,567	2,580
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2025	0	127	23,956,929	346,667,351	5,863,944	84,690,746	10,567	2,580
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2026	0	96	16,500,242	363,167,593	4,018,876	88,709,622	6,981	1,732
Non-Residential	1	Commercial HVAC Upgrade	CHVAC	2027	0	32	1,901,481	365,069,074	346,280	89,055,902	1,421	245
Non-Residential	1	Commercial Lighting	CL	2010	399	399	3,721,777	3,721,777	3,323,130	3,323,130	3,302	2,942
Non-Residential	1	Commercial Lighting	CL	2011	1,308	1,707	32,993,706	36,715,483	29,338,230	32,661,360	13,632	12,120
Non-Residential	1	Commercial Lighting	CL	2012	728	2,435	74,218,821	110,934,304	65,980,209	98,641,569	20,903	18,591
Non-Residential	1	Commercial Lighting	CL	2013	0	2,435	81,651,797	192,586,100	72,618,940	171,260,509	20,925	18,610
Non-Residential	1	Commercial Lighting	CL	2014	21	2,456	81,956,105	274,542,206	72,888,253	244,148,762	21,085	18,752
Non-Residential	1	Commercial Lighting	CL	2015	0	2,456	82,547,441	357,089,646	73,411,585	317,560,347	21,148	18,808
Non-Residential	1	Commercial Lighting	CL	2016	0	2,456	82,550,485	439,640,131	73,414,294	390,974,641	21,177	18,834
Non-Residential	1	Commercial Lighting	CL	2017	0	2,456	82,547,429	522,187,560	73,411,574	464,386,216	21,191	18,846
Non-Residential	1	Commercial Lighting	CL	2018	0	2,456	82,544,393	604,731,953	73,408,873	537,795,088	21,147	18,807
Non-Residential	1	Commercial Lighting	CL	2019	0	2,456	82,547,436	687,279,389	73,411,581	611,206,669	21,148	18,808
Non-Residential	1	Commercial Lighting	CL	2020	0	2,456	78,857,282	766,136,671	70,116,645	681,323,314	21,097	18,762
Non-Residential	1	Commercial Lighting	CL	2021	0	2,006	49,701,450	815,838,121	44,204,614	725,527,928	16,757	14,898
Non-Residential	1	Commercial Lighting	CL	2022	0	592	8,401,641	824,239,763	7,496,493	733,024,422	6,199	5,517
Non-Residential	1	Commercial Lighting	CL	2023	0	21	895,651	30,344,013	792,651	26,877,155	230	204
Non-Residential	1	Commercial Lighting	CL	2024	0	21	594,469	30,938,482	526,105	27,403,260	229	203
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2014	118	118	442,332	442,332	309,632	309,632	1,022	716
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2015	1,254	1,372	28,318,818	28,761,150	19,823,173	20,132,805	12,077	8,454
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2016	1,246	2,618	88,916,311	117,677,461	62,241,418	82,374,223	27,024	18,917
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2017	891	3,509	161,363,159	279,040,620	112,954,211	195,328,434	42,847	29,993
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2018	692	4,201	218,276,275	497,316,895	152,793,393	348,121,826	53,686	37,580
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2019	484	4,685	287,699,118	785,016,013	201,389,383	549,511,209	64,810	45,367
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2020	17	4,702	293,966,946	1,078,982,959	205,776,862	755,288,071	64,951	45,466
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2021	0	4,702	294,065,221	1,373,048,180	205,845,655	961,133,726	65,176	45,623
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2022	0	4,702	294,053,986	1,667,102,166	205,837,791	1,166,971,516	65,178	45,625
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2023	0	4,702	294,054,071	1,961,156,238	205,837,850	1,372,809,366	65,080	45,556
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2024	0	4,702	294,040,562	2,255,196,800	205,828,394	1,578,637,760	64,944	45,461
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2025	0	4,643	274,450,896	2,529,647,696	192,115,627	1,770,753,387	63,629	44,541
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2026	0	3,515	216,716,359	2,746,364,055	151,701,451	1,922,454,838	52,267	36,587
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2027	0	2,301	145,117,945	2,891,482,000	101,582,561	2,024,037,400	38,160	26,712
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2028	0	1,340	83,614,098	2,975,096,097	58,529,868	2,082,567,268	23,031	16,121
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2029	0	630	15,312,741	2,990,408,838	10,718,919	2,093,286,187	12,686	8,880
Non-Residential	3	Non-Residential Lighting Systems & Controls	CLT2	2030	0	20	199,732	146,868,143	139,812	102,807,700	155	108
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2020	415	415	12,044,385	12,044,385	6,720,767	6,720,767	5,180	2,890
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2021	393	808	41,258,620	53,303,005	23,022,310	29,743,077	9,221	5,145
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2022	205	1,013	59,566,747	112,869,753	33,238,245	62,981,322	12,418	6,929
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2023	0	1,013	70,182,330	183,052,083	39,161,740	102,143,062	12,540	6,997
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2024	0	1,013	70,182,549	253,234,632	39,161,863	141,304,925	12,528	6,991
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2025	0	1,013	70,182,335	323,416,967	39,161,743	180,466,668	12,531	6,992
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2026	0	1,013	70,182,341	393,599,309	39,161,746	219,628,414	12,532	6,993
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2027	0	1,013	70,182,119	463,781,428	39,161,623	258,790,037	12,549	7,002



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2028	0	987	68,401,944	522,377,932	38,168,285	291,486,886	12,230	6,825
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2029	0	987	68,402,155	590,780,087	38,168,402	329,655,288	12,217	6,817
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2030	0	987	60,931,146	651,711,233	33,999,580	363,654,868	12,200	6,807
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2031	0	649	31,472,925	683,184,158	17,561,892	381,216,760	7,995	4,461
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2032	0	230	11,871,819	695,055,978	6,624,475	387,841,236	3,247	1,812
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2033	0	29	611,737	695,667,714	341,349	388,182,585	1,026	573
Non-Residential	8	Non-Residential Multifamily	CMFP	2022	5	5	6,275	6,275	5,648	5,648	43	39
Non-Residential	8	Non-Residential Multifamily	CMFP	2023	0	5	165,606	171,881	149,045	154,693	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2024	0	5	165,612	337,493	149,051	303,744	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2025	0	5	165,606	503,099	149,045	452,789	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2026	0	5	165,606	668,705	149,045	601,834	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2027	0	5	165,599	834,304	149,039	750,874	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2028	0	5	165,606	999,910	149,045	899,919	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2029	0	5	165,612	1,165,522	149,051	1,048,970	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2030	0	5	165,606	1,331,128	149,045	1,198,015	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2031	0	5	76,836	1,407,964	69,153	1,267,168	44	40
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2022	366	366	931,840	931,840	838,656	838,656	1,039	935
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2023	0	366	8,848,008	9,779,848	7,963,207	8,801,863	6,241	5,617
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2024	0	366	8,848,008	18,627,856	7,963,207	16,765,070	6,250	5,625
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2025	0	366	8,848,008	27,475,864	7,963,207	24,728,278	6,251	5,626
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2026	0	366	8,799,725	36,275,589	7,919,752	32,648,030	6,238	5,614
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2027	0	366	8,158,919	44,434,509	7,343,027	39,991,058	5,965	5,369
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2028	0	256	4,255,974	48,690,483	3,830,377	43,821,435	970	873
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2029	0	256	4,247,900	52,938,383	3,823,110	47,644,545	968	871
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2030	0	234	4,211,241	57,149,624	3,790,117	51,434,661	968	871
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2031	0	231	4,030,847	61,180,470	3,627,762	55,062,423	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2032	0	231	4,030,848	65,211,319	3,627,764	58,690,187	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2033	0	231	4,030,847	69,242,165	3,627,762	62,317,949	937	844
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2034	0	231	4,030,847	73,273,012	3,627,762	65,945,711	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2035	0	231	4,030,845	77,303,857	3,627,761	69,573,472	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2036	0	231	4,030,847	81,334,704	3,627,762	73,201,234	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2037	0	231	3,772,503	85,107,207	3,395,253	76,596,486	935	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2038	0	225	574,778	85,681,985	517,301	77,113,787	488	439
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2039	0	225	574,777	86,256,762	517,299	77,631,086	488	439
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2040	0	225	432,371	86,689,133	389,134	78,020,220	409	368
Non-Residential	6	Non-Residential Prescriptive	CNRP	2017	4	4	22	22	19	19	0	0
Non-Residential	6	Non-Residential Prescriptive	CNRP	2018	865	869	4,132,364	4,132,386	3,512,509	3,512,528	3,147	2,675
Non-Residential	6	Non-Residential Prescriptive	CNRP	2019	666	1,535	9,165,232	13,297,617	7,790,447	11,302,975	5,307	4,511
Non-Residential	6	Non-Residential Prescriptive	CNRP	2020	577	2,112	30,821,110	44,118,728	18,033,747	29,336,722	11,046	6,946
Non-Residential	6	Non-Residential Prescriptive	CNRP	2021	709	2,821	65,043,491	109,162,219	33,632,107	62,968,828	17,666	12,211
Non-Residential	6	Non-Residential Prescriptive	CNRP	2022	14	2,835	82,150,065	191,312,284	41,751,577	104,720,406	23,169	15,985
Non-Residential	6	Non-Residential Prescriptive	CNRP	2023	0	2,835	82,172,250	273,484,535	41,760,533	146,480,939	23,096	15,917
Non-Residential	6	Non-Residential Prescriptive	CNRP	2024	0	2,835	80,741,043	354,225,578	40,544,100	187,025,038	23,026	15,857
Non-Residential	6	Non-Residential Prescriptive	CNRP	2025	0	2,415	74,907,143	429,132,721	35,585,191	222,610,230	21,470	14,521
Non-Residential	6	Non-Residential Prescriptive	CNRP	2026	0	1,949	66,680,594	495,813,315	30,333,928	252,944,157	18,392	11,958
Non-Residential	6	Non-Residential Prescriptive	CNRP	2027	0	1,133	26,751,099	522,564,414	12,901,838	265,845,996	8,777	6,666
Non-Residential	6	Non-Residential Prescriptive	CNRP	2028	0	354	4,201,037	526,765,451	1,658,852	267,504,848	2,143	896
Non-Residential	7	Non-Residential Window Film	CSW2	2020	22	22	147,317	147,317	117,854	117,854	121	97
Non-Residential	7	Non-Residential Window Film	CSW2	2021	19	41	315,655	462,972	252,524	370,378	157	126
Non-Residential	7	Non-Residential Window Film	CSW2	2022	28	69	350,063	813,035	280,050	650,428	169	136
Non-Residential	7	Non-Residential Window Film	CSW2	2023	0	69	510,331	1,323,367	408,265	1,058,693	218	174
Non-Residential	7	Non-Residential Window Film	CSW2	2024	0	69	510,331	1,833,698	408,265	1,466,958	212	168
Non-Residential	7	Non-Residential Window Film	CSW2	2025	0	69	510,331	2,344,029	408,265	1,875,223	218	174
Non-Residential	7	Non-Residential Window Film	CSW2	2026	0	69	510,331	2,854,360	408,265	2,283,488	218	174
Non-Residential	7	Non-Residential Window Film	CSW2	2027	0	69	510,331	3,364,692	408,265	2,691,753	218	175
Non-Residential	7	Non-Residential Window Film	CSW2	2028	0	69	510,331	3,875,023	408,265	3,100,018	213	170
Non-Residential	7	Non-Residential Window Film	CSW2	2029	0	69	510,331	4,385,354	408,265	3,508,283	218	174
Non-Residential	7	Non-Residential Window Film	CSW2	2030	0	69	363,737	4,749,092	290,990	3,799,273	218	174
Non-Residential	7	Non-Residential Window Film	CSW2	2031	0	47	194,920	4,944,012	155,936	3,955,209	101	81
Non-Residential	7	Non-Residential Window Film	CSW2	2032	0	23	160,390	5,104,402	128,312	4,083,521	65	52
Non-Residential	3	Non-Residential Window Film	CSWF	2014	3	3	482	482	385	385	3	3
Non-Residential	3	Non-Residential Window Film	CSWF	2015	22	25	4,189,931	4,190,413	3,351,945	3,352,330	4,740	3,792
Non-Residential	3	Non-Residential Window Film	CSWF	2016	70	95	4,499,838	8,690,251	3,599,871	6,952,201	5,037	4,030
Non-Residential	3	Non-Residential Window Film	CSWF	2017	59	154	5,486,697	14,176,948	4,389,357	11,341,558	6,392	5,114
Non-Residential	3	Non-Residential Window Film	CSWF	2018	91	245	6,526,382	20,703,330	5,221,106	16,562,664	7,307	5,846
Non-Residential	3	Non-Residential Window Film	CSWF	2019	8	253	6,608,939	27,312,269	5,287,151	21,849,815	7,348	5,878
Non-Residential	3	Non-Residential Window Film	CSWF	2020	0	253	6,609,654	33,921,923	5,287,723	27,137,538	7,331	5,865



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2028	0	26	1,780,386	11,585,825	993,455	6,464,890	315	176
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2029	0	26	1,780,393	13,366,219	993,460	7,458,350	315	176
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2030	0	26	1,742,421	15,108,640	972,271	8,430,621	315	176
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2031	0	17	1,608,476	16,717,116	897,529	9,328,151	294	164
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2032	0	12	1,341,763	18,058,879	748,704	10,076,854	261	146
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2033	0	7	48,383	18,107,262	26,998	10,103,852	68	38
Non-Residential	8	Non-Residential Multifamily	CMFP	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Multifamily	CMFP	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Multifamily	CMFP	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Multifamily	CMFP	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Multifamily	CMFP	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Multifamily	CMFP	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Multifamily	CMFP	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Multifamily	CMFP	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Multifamily	CMFP	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Multifamily	CMFP	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2040	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	6	Non-Residential Prescriptive	CNRP	2017	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	6	Non-Residential Prescriptive	CNRP	2018	21	21	23,996	23,996	20,397	20,397	26	22
Non-Residential	6	Non-Residential Prescriptive	CNRP	2019	36	57	414,169	438,165	352,044	372,440	57	48
Non-Residential	6	Non-Residential Prescriptive	CNRP	2020	19	76	923,954	1,362,119	574,015	946,455	271	138
Non-Residential	6	Non-Residential Prescriptive	CNRP	2021	44	120	2,908,259	4,270,378	1,455,396	2,401,851	666	445
Non-Residential	6	Non-Residential Prescriptive	CNRP	2022	0	120	3,194,739	7,465,117	1,609,156	4,011,007	694	477
Non-Residential	6	Non-Residential Prescriptive	CNRP	2023	0	120	3,194,739	10,659,856	1,609,155	5,620,162	693	475
Non-Residential	6	Non-Residential Prescriptive	CNRP	2024	0	120	3,194,717	13,854,573	1,609,143	7,229,305	693	476
Non-Residential	6	Non-Residential Prescriptive	CNRP	2025	0	120	2,939,271	16,793,844	1,392,008	8,621,313	655	443
Non-Residential	6	Non-Residential Prescriptive	CNRP	2026	0	79	2,735,594	19,529,438	1,220,556	9,841,869	635	425
Non-Residential	6	Non-Residential Prescriptive	CNRP	2027	0	56	1,012,754	20,542,192	530,554	10,372,423	448	312
Non-Residential	6	Non-Residential Prescriptive	CNRP	2028	0	4	23,209	20,565,402	14,467	10,386,891	61	37
Non-Residential	7	Non-Residential Window Film	CSW2	2020	1	1	6,061	6,061	4,849	4,849	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2021	1	2	17,431	23,492	13,945	18,794	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2022	0	2	17,436	40,928	13,948	32,742	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2023	0	2	17,436	58,363	13,948	46,691	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2024	0	2	17,436	75,799	13,948	60,639	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2025	0	2	17,436	93,235	13,948	74,588	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2026	0	2	17,436	110,670	13,948	88,536	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2027	0	2	17,436	128,106	13,948	102,485	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2028	0	2	17,436	145,541	13,948	116,433	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2029	0	2	17,436	162,977	13,948	130,382	9	7
Non-Residential	7	Non-Residential Window Film	CSW2	2030	0	2	11,428	174,405	9,143	139,524	8	7
Non-Residential	7	Non-Residential Window Film	CSW2	2031	0	1	4	174,410	4	139,528	0	0
Non-Residential	7	Non-Residential Window Film	CSW2	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	3	Non-Residential Window Film	CSWF	2014	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	3	Non-Residential Window Film	CSWF	2015	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	3	Non-Residential Window Film	CSWF	2016	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	3	Non-Residential Window Film	CSWF	2017	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	3	Non-Residential Window Film	CSWF	2018	1	1	1,821	1,821	1,457	1,457	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2019	0	1	4,516	6,337	3,613	5,069	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2020	0	1	4,516	10,853	3,613	8,682	2	2



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2028	0	1,013	70,182,329	533,963,757	39,161,740	297,951,777	12,546	7,000
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2029	0	1,013	70,182,548	604,146,306	39,161,862	337,113,639	12,531	6,993
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2030	0	1,013	62,673,567	666,819,873	34,971,851	372,085,489	12,514	6,983
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2031	0	666	33,081,401	699,901,274	18,459,422	390,544,911	8,289	4,625
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2032	0	242	13,213,582	713,114,856	7,373,179	397,918,090	3,508	1,958
Non-Residential	7	Non-Residential Lighting Systems & Controls	CLT3	2033	0	36	660,120	713,774,976	368,347	398,286,437	1,094	610
Non-Residential	8	Non-Residential Multifamily	CMFP	2022	5	5	6,275	6,275	5,648	5,648	43	39
Non-Residential	8	Non-Residential Multifamily	CMFP	2023	0	5	165,606	171,881	149,045	154,693	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2024	0	5	165,612	337,493	149,051	303,744	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2025	0	5	165,606	503,099	149,045	452,789	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2026	0	5	165,606	668,705	149,045	601,834	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2027	0	5	165,599	834,304	149,039	750,874	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2028	0	5	165,606	999,910	149,045	899,919	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2029	0	5	165,612	1,165,522	149,051	1,048,970	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2030	0	5	165,606	1,331,128	149,045	1,198,015	46	41
Non-Residential	8	Non-Residential Multifamily	CMFP	2031	0	5	76,836	1,407,964	69,153	1,267,168	44	40
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2022	366	366	931,840	931,840	838,656	838,656	1,039	935
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2023	0	366	8,848,008	9,779,848	7,963,207	8,801,863	6,241	5,617
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2024	0	366	8,848,008	18,627,856	7,963,207	16,765,070	6,250	5,625
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2025	0	366	8,848,008	27,475,864	7,963,207	24,728,278	6,251	5,626
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2026	0	366	8,799,725	36,275,589	7,919,752	32,648,030	6,238	5,614
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2027	0	366	8,158,919	44,434,509	7,343,027	39,991,058	5,965	5,369
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2028	0	256	4,255,974	48,690,483	3,830,377	43,821,435	970	873
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2029	0	256	4,247,900	52,938,383	3,823,110	47,644,545	968	871
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2030	0	234	4,211,241	57,149,624	3,790,117	51,434,661	968	871
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2031	0	231	4,030,847	61,180,470	3,627,762	55,062,423	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2032	0	231	4,030,848	65,211,319	3,627,764	58,690,187	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2033	0	231	4,030,847	69,242,165	3,627,762	62,317,949	937	844
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2034	0	231	4,030,847	73,273,012	3,627,762	65,945,711	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2035	0	231	4,030,845	77,303,857	3,627,761	69,573,472	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2036	0	231	4,030,847	81,334,704	3,627,762	73,201,234	936	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2037	0	231	3,772,503	85,107,207	3,395,253	76,596,486	935	842
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2038	0	225	574,778	85,681,985	517,301	77,113,787	488	439
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2039	0	225	574,777	86,256,762	517,299	77,631,086	488	439
Non-Residential	9	Non-Residential Prescriptive Enhanced	CNR2	2040	0	225	432,371	86,689,133	389,134	78,020,220	409	368
Non-Residential	6	Non-Residential Prescriptive	CNRP	2017	4	4	22	22	19	19	0	0
Non-Residential	6	Non-Residential Prescriptive	CNRP	2018	886	890	4,156,360	4,156,382	3,532,906	3,532,924	3,173	2,697
Non-Residential	6	Non-Residential Prescriptive	CNRP	2019	702	1,592	9,579,401	13,735,783	8,142,491	11,675,415	5,364	4,559
Non-Residential	6	Non-Residential Prescriptive	CNRP	2020	596	2,188	31,745,064	45,480,847	18,607,762	30,283,177	11,317	7,084
Non-Residential	6	Non-Residential Prescriptive	CNRP	2021	753	2,941	67,951,750	113,432,597	35,087,503	65,370,680	18,331	12,656
Non-Residential	6	Non-Residential Prescriptive	CNRP	2022	14	2,955	85,344,804	198,777,402	43,360,733	108,731,412	23,863	16,462
Non-Residential	6	Non-Residential Prescriptive	CNRP	2023	0	2,955	85,366,989	284,144,391	43,369,688	152,101,101	23,788	16,392
Non-Residential	6	Non-Residential Prescriptive	CNRP	2024	0	2,955	83,935,760	368,080,151	42,153,242	194,254,343	23,719	16,332
Non-Residential	6	Non-Residential Prescriptive	CNRP	2025	0	2,535	77,846,414	445,926,565	36,977,199	231,231,543	22,125	14,964
Non-Residential	6	Non-Residential Prescriptive	CNRP	2026	0	2,028	69,416,188	515,342,753	31,554,484	262,786,027	19,027	12,383
Non-Residential	6	Non-Residential Prescriptive	CNRP	2027	0	1,189	27,763,853	543,106,606	13,432,392	276,218,419	9,224	6,979
Non-Residential	6	Non-Residential Prescriptive	CNRP	2028	0	358	4,224,247	547,330,852	1,673,319	277,891,738	2,205	933
Non-Residential	7	Non-Residential Window Film	CSW2	2020	23	23	153,378	153,378	122,703	122,703	130	104
Non-Residential	7	Non-Residential Window Film	CSW2	2021	20	43	333,086	486,465	266,469	389,172	166	133
Non-Residential	7	Non-Residential Window Film	CSW2	2022	28	71	367,498	853,963	293,999	683,171	178	142
Non-Residential	7	Non-Residential Window Film	CSW2	2023	0	71	527,767	1,381,730	422,213	1,105,384	227	181
Non-Residential	7	Non-Residential Window Film	CSW2	2024	0	71	527,767	1,909,497	422,213	1,527,597	221	175
Non-Residential	7	Non-Residential Window Film	CSW2	2025	0	71	527,767	2,437,264	422,213	1,949,811	226	181
Non-Residential	7	Non-Residential Window Film	CSW2	2026	0	71	527,767	2,965,031	422,213	2,372,024	226	181
Non-Residential	7	Non-Residential Window Film	CSW2	2027	0	71	527,767	3,492,797	422,213	2,794,238	227	182
Non-Residential	7	Non-Residential Window Film	CSW2	2028	0	71	527,767	4,020,564	422,213	3,216,451	221	177
Non-Residential	7	Non-Residential Window Film	CSW2	2029	0	71	527,767	4,548,331	422,213	3,638,665	226	181
Non-Residential	7	Non-Residential Window Film	CSW2	2030	0	71	375,166	4,923,497	300,133	3,938,797	226	181
Non-Residential	7	Non-Residential Window Film	CSW2	2031	0	48	194,924	5,118,421	155,940	4,094,737	101	81
Non-Residential	7	Non-Residential Window Film	CSW2	2032	0	23	160,390	5,104,402	128,312	4,083,521	65	52
Non-Residential	3	Non-Residential Window Film	CSWF	2014	3	3	482	482	385	385	3	3
Non-Residential	3	Non-Residential Window Film	CSWF	2015	22	25	4,189,931	4,190,413	3,351,945	3,352,330	4,740	3,792
Non-Residential	3	Non-Residential Window Film	CSWF	2016	70	95	4,499,838	8,690,251	3,599,871	6,952,201	5,037	4,030
Non-Residential	3	Non-Residential Window Film	CSWF	2017	59	154	5,486,697	14,176,948	4,389,357	11,341,558	6,392	5,114
Non-Residential	3	Non-Residential Window Film	CSWF	2018	92	246	6,528,203	20,705,151	5,222,562	16,564,121	7,309	5,848
Non-Residential	3	Non-Residential Window Film	CSWF	2019	8	254	6,613,455	27,318,605	5,290,764	21,854,884	7,350	5,880
Non-Residential	3	Non-Residential Window Film	CSWF	2020	0	254	6,614,170	33,932,776	5,291,336	27,146,220	7,333	5,866



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	3	Non-Residential Window Film	CSWF	2021	0	253	6,609,655	40,531,578	5,287,724	32,425,263	7,384	5,907
Non-Residential	3	Non-Residential Window Film	CSWF	2022	0	253	6,609,654	47,141,232	5,287,723	37,712,986	7,373	5,898
Non-Residential	3	Non-Residential Window Film	CSWF	2023	0	253	6,609,654	53,750,886	5,287,723	43,000,709	7,332	5,866
Non-Residential	3	Non-Residential Window Film	CSWF	2024	0	253	6,609,233	60,360,120	5,287,387	48,288,096	7,347	5,878
Non-Residential	3	Non-Residential Window Film	CSWF	2025	0	249	2,423,966	62,784,086	1,939,173	50,227,269	2,597	2,078
Non-Residential	3	Non-Residential Window Film	CSWF	2026	0	227	2,110,791	64,894,876	1,688,632	51,915,901	2,289	1,831
Non-Residential	3	Non-Residential Window Film	CSWF	2027	0	161	1,127,082	66,021,958	901,665	52,817,566	1,407	1,126
Non-Residential	3	Non-Residential Window Film	CSWF	2028	0	102	83,575	66,105,533	66,860	52,884,427	71	57
Non-Residential	3	Non-Residential Window Film	CSWF	2029	0	8	730	66,106,264	584	52,885,011	4	3
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2021	1	1	27,430	27,430	24,687	24,687	22	20
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2022	19	20	1,368,468	1,395,899	1,231,622	1,256,309	839	755
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2023	0	20	4,998,318	6,394,216	4,498,486	5,754,795	1,320	1,188
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2024	0	20	4,997,981	11,392,197	4,498,183	10,252,977	1,318	1,186
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2025	0	20	4,998,317	16,390,515	4,498,486	14,751,463	1,318	1,187
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2026	0	20	4,998,318	21,388,832	4,498,486	19,249,949	1,318	1,187
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2027	0	20	4,998,655	26,387,487	4,498,789	23,748,738	1,322	1,190
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2028	0	20	4,998,317	31,385,804	4,498,486	28,247,224	1,321	1,189
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2029	0	20	4,997,981	36,383,785	4,498,183	32,745,406	1,318	1,186
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2030	0	20	4,998,318	41,382,102	4,498,486	37,243,892	1,318	1,187
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2031	0	20	4,998,318	46,380,420	4,498,486	41,742,378	1,318	1,187
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2032	0	20	4,998,655	51,379,075	4,498,790	46,241,168	1,320	1,188
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2033	0	20	4,998,317	56,377,392	4,498,485	50,739,653	1,322	1,190
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2034	0	20	4,814,970	61,192,363	4,333,473	55,073,126	1,312	1,181
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2035	0	10	451,174	61,643,537	406,057	55,479,183	326	294
Non-Residential	7	Non-Residential Office	CTSO	2020	6	6	8,149	8,149	7,334	7,334	40	36
Non-Residential	7	Non-Residential Office	CTSO	2021	59	65	1,201,486	1,209,635	1,081,338	1,088,672	2,194	1,975
Non-Residential	7	Non-Residential Office	CTSO	2022	16	81	1,840,743	3,050,378	1,656,668	2,745,340	2,390	2,151
Non-Residential	7	Non-Residential Office	CTSO	2023	0	81	5,551,947	8,602,325	4,996,752	7,742,092	5,767	5,191
Non-Residential	7	Non-Residential Office	CTSO	2024	0	81	5,552,048	14,154,372	4,996,843	12,738,935	5,774	5,197
Non-Residential	7	Non-Residential Office	CTSO	2025	0	81	5,551,947	19,706,319	4,996,752	17,735,687	5,771	5,194
Non-Residential	7	Non-Residential Office	CTSO	2026	0	81	5,551,948	25,258,267	4,996,754	22,732,441	5,763	5,187
Non-Residential	7	Non-Residential Office	CTSO	2027	0	81	5,543,958	30,802,226	4,989,562	27,722,003	5,770	5,193
Non-Residential	7	Non-Residential Office	CTSO	2028	0	56	4,349,874	35,152,099	3,914,886	31,636,889	4,512	4,061
Non-Residential	7	Non-Residential Office	CTSO	2029	0	16	3,722,592	38,874,692	3,350,333	34,987,222	4,312	3,881
Non-Residential	2	Non-Residential Distributed Generation	DG	2012	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2013	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2014	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2015	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2016	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2017	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2018	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2019	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2020	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2021	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2022	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Energy Audit	EACI	2012	1	1	1,448	1,448	1,411	1,411	8	8
Non-Residential	2	Non-Residential Energy Audit	EACI	2013	302	303	832,461	833,908	655,032	656,444	830	676
Non-Residential	2	Non-Residential Energy Audit	EACI	2014	1,116	1,419	16,959,386	17,793,295	14,561,092	15,217,536	4,439	4,031
Non-Residential	2	Non-Residential Energy Audit	EACI	2015	73	1,492	36,717,432	54,510,727	33,070,082	48,287,618	5,928	5,361
Non-Residential	2	Non-Residential Energy Audit	EACI	2016	125	1,617	38,853,448	93,364,175	35,045,701	83,333,319	6,352	5,753
Non-Residential	2	Non-Residential Energy Audit	EACI	2017	15	1,632	43,735,243	137,099,417	39,549,666	122,882,984	7,024	6,377
Non-Residential	2	Non-Residential Energy Audit	EACI	2018	0	1,632	43,749,880	180,849,298	39,561,961	162,444,945	7,023	6,376
Non-Residential	2	Non-Residential Energy Audit	EACI	2019	0	1,632	43,748,617	224,597,915	39,560,713	202,005,658	7,023	6,376
Non-Residential	2	Non-Residential Energy Audit	EACI	2020	0	1,632	42,931,947	267,529,862	38,917,826	240,923,484	6,971	6,330
Non-Residential	2	Non-Residential Energy Audit	EACI	2021	0	1,393	26,877,042	294,406,904	25,080,911	266,004,394	4,405	4,088
Non-Residential	2	Non-Residential Energy Audit	EACI	2022	0	483	7,034,143	301,441,046	6,493,509	272,497,904	1,095	1,014



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	3	Non-Residential Window Film	CSWF	2021	0	1	4,516	15,369	3,613	12,295	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2022	0	1	4,516	19,884	3,613	15,908	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2023	0	1	4,516	24,400	3,613	19,520	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2024	0	1	4,516	28,916	3,613	23,133	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2025	0	1	4,516	33,432	3,613	26,746	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2026	0	1	4,516	37,948	3,613	30,359	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2027	0	1	4,516	42,464	3,613	33,971	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2028	0	1	2,707	45,171	2,165	36,137	2	2
Non-Residential	3	Non-Residential Window Film	CSWF	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Office	CTSO	2020	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	7	Non-Residential Office	CTSO	2021	2	2	23,228	23,228	20,905	20,905	52	47
Non-Residential	7	Non-Residential Office	CTSO	2022	0	2	43,444	66,672	39,100	60,005	76	69
Non-Residential	7	Non-Residential Office	CTSO	2023	0	2	43,444	110,116	39,100	99,105	76	69
Non-Residential	7	Non-Residential Office	CTSO	2024	0	2	43,448	153,564	39,103	138,207	76	69
Non-Residential	7	Non-Residential Office	CTSO	2025	0	2	43,444	197,008	39,100	177,307	76	69
Non-Residential	7	Non-Residential Office	CTSO	2026	0	2	43,444	240,452	39,100	216,407	76	68
Non-Residential	7	Non-Residential Office	CTSO	2027	0	2	43,441	283,893	39,097	255,504	76	69
Non-Residential	7	Non-Residential Office	CTSO	2028	0	2	20,318	304,211	18,287	273,790	38	34
Non-Residential	7	Non-Residential Office	CTSO	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2012	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2013	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2014	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2015	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2016	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2017	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2018	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2019	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2020	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Distributed Generation	DG	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Energy Audit	EACI	2012	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Energy Audit	EACI	2013	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	2	Non-Residential Energy Audit	EACI	2014	16	16	64,463	64,463	63,852	63,852	60	60
Non-Residential	2	Non-Residential Energy Audit	EACI	2015	78	94	594,243	658,706	558,890	622,743	111	100
Non-Residential	2	Non-Residential Energy Audit	EACI	2016	12	106	756,611	1,415,317	678,762	1,301,505	112	102
Non-Residential	2	Non-Residential Energy Audit	EACI	2017	2	108	1,659,825	3,075,143	1,427,011	2,728,516	548	443
Non-Residential	2	Non-Residential Energy Audit	EACI	2018	0	108	1,817,661	4,892,804	1,551,193	4,279,710	637	513
Non-Residential	2	Non-Residential Energy Audit	EACI	2019	0	108	1,817,651	6,710,455	1,551,186	5,830,895	637	512
Non-Residential	2	Non-Residential Energy Audit	EACI	2020	0	108	1,817,652	8,528,107	1,551,186	7,382,081	636	512
Non-Residential	2	Non-Residential Energy Audit	EACI	2021	0	108	1,754,480	10,282,587	1,488,615	8,870,696	639	514
Non-Residential	2	Non-Residential Energy Audit	EACI	2022	0	108	1,224,127	11,506,714	992,786	9,863,482	591	467



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	3	Non-Residential Window Film	CSWF	2021	0	254	6,614,171	40,546,947	5,291,337	32,437,557	7,386	5,909
Non-Residential	3	Non-Residential Window Film	CSWF	2022	0	254	6,614,170	47,161,117	5,291,336	37,728,893	7,375	5,900
Non-Residential	3	Non-Residential Window Film	CSWF	2023	0	254	6,614,170	53,775,287	5,291,336	43,020,230	7,334	5,868
Non-Residential	3	Non-Residential Window Film	CSWF	2024	0	254	6,613,749	60,389,036	5,291,000	48,311,229	7,350	5,880
Non-Residential	3	Non-Residential Window Film	CSWF	2025	0	250	2,428,482	62,817,518	1,942,786	50,254,015	2,600	2,080
Non-Residential	3	Non-Residential Window Film	CSWF	2026	0	228	2,115,306	64,932,825	1,692,245	51,946,260	2,291	1,833
Non-Residential	3	Non-Residential Window Film	CSWF	2027	0	162	1,131,598	66,064,422	905,278	52,851,538	1,409	1,127
Non-Residential	3	Non-Residential Window Film	CSWF	2028	0	103	86,282	66,150,704	69,025	52,920,563	73	59
Non-Residential	3	Non-Residential Window Film	CSWF	2029	0	8	730	66,106,264	584	52,885,011	4	3
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2021	1	1	27,430	27,430	24,687	24,687	22	20
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2022	19	20	1,368,468	1,395,899	1,231,622	1,256,309	839	755
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2023	0	20	4,998,318	6,394,216	4,498,486	5,754,795	1,320	1,188
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2024	0	20	4,997,981	11,392,197	4,498,183	10,252,977	1,318	1,186
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2025	0	20	4,998,317	16,390,515	4,498,486	14,751,463	1,318	1,187
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2026	0	20	4,998,318	21,388,832	4,498,486	19,249,949	1,318	1,187
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2027	0	20	4,998,655	26,387,487	4,498,789	23,748,738	1,322	1,190
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2028	0	20	4,998,317	31,385,804	4,498,486	28,247,224	1,321	1,189
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2029	0	20	4,997,981	36,383,785	4,498,183	32,745,406	1,318	1,186
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2030	0	20	4,998,318	41,382,102	4,498,486	37,243,892	1,318	1,187
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2031	0	20	4,998,318	46,380,420	4,498,486	41,742,378	1,318	1,187
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2032	0	20	4,998,655	51,379,075	4,498,790	46,241,168	1,320	1,188
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2033	0	20	4,998,317	56,377,392	4,498,485	50,739,653	1,322	1,190
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2034	0	20	4,814,970	61,192,363	4,333,473	55,073,126	1,312	1,181
Non-Residential	7	Non-Residential Small Manufacturing	CTSM	2035	0	10	451,174	61,643,537	406,057	55,479,183	326	294
Non-Residential	7	Non-Residential Office	CTSO	2020	6	6	8,149	8,149	7,334	7,334	40	36
Non-Residential	7	Non-Residential Office	CTSO	2021	61	67	1,224,714	1,232,863	1,102,243	1,109,577	2,246	2,021
Non-Residential	7	Non-Residential Office	CTSO	2022	16	83	1,884,187	3,117,050	1,695,768	2,805,345	2,466	2,219
Non-Residential	7	Non-Residential Office	CTSO	2023	0	83	5,595,391	8,712,441	5,035,852	7,841,197	5,843	5,259
Non-Residential	7	Non-Residential Office	CTSO	2024	0	83	5,595,495	14,307,936	5,035,946	12,877,143	5,850	5,265
Non-Residential	7	Non-Residential Office	CTSO	2025	0	83	5,595,391	19,903,327	5,035,852	17,912,994	5,847	5,263
Non-Residential	7	Non-Residential Office	CTSO	2026	0	83	5,595,393	25,498,719	5,035,853	22,948,847	5,839	5,255
Non-Residential	7	Non-Residential Office	CTSO	2027	0	83	5,587,399	31,086,118	5,028,659	27,977,506	5,846	5,261
Non-Residential	7	Non-Residential Office	CTSO	2028	0	58	4,370,192	35,456,310	3,933,173	31,910,679	4,550	4,095
Non-Residential	7	Non-Residential Office	CTSO	2029	0	16	3,722,592	38,874,692	3,350,333	34,987,222	4,312	3,881
Non-Residential	2	Non-Residential Distributed Generation	DG	2012	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2013	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2014	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2015	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2016	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2017	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2018	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2019	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2020	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2021	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Distributed Generation	DG	2022	0	0	0	0	0	0	0	0
Non-Residential	2	Non-Residential Energy Audit	EACI	2012	1	1	1,448	1,448	1,411	1,411	8	8
Non-Residential	2	Non-Residential Energy Audit	EACI	2013	302	303	832,461	833,908	655,032	656,444	830	676
Non-Residential	2	Non-Residential Energy Audit	EACI	2014	1,132	1,435	17,023,850	17,857,758	14,624,945	15,281,388	4,500	4,090
Non-Residential	2	Non-Residential Energy Audit	EACI	2015	151	1,586	37,311,675	55,169,433	33,628,972	48,910,360	6,039	5,461
Non-Residential	2	Non-Residential Energy Audit	EACI	2016	137	1,723	39,610,059	94,779,492	35,724,463	84,634,824	6,465	5,855
Non-Residential	2	Non-Residential Energy Audit	EACI	2017	17	1,740	45,395,068	140,174,560	40,976,677	125,611,501	7,572	6,820
Non-Residential	2	Non-Residential Energy Audit	EACI	2018	0	1,740	45,567,542	185,742,102	41,113,154	166,724,655	7,660	6,888
Non-Residential	2	Non-Residential Energy Audit	EACI	2019	0	1,740	45,566,269	231,308,371	41,111,899	207,836,553	7,660	6,888
Non-Residential	2	Non-Residential Energy Audit	EACI	2020	0	1,740	44,749,599	276,057,969	40,469,012	248,305,565	7,607	6,842
Non-Residential	2	Non-Residential Energy Audit	EACI	2021	0	1,501	28,631,522	304,689,491	26,569,526	274,875,091	5,044	4,603
Non-Residential	2	Non-Residential Energy Audit	EACI	2022	0	591	8,258,270	312,947,760	7,486,295	282,361,386	1,686	1,481



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions				VA								
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	2	Non-Residential Energy Audit	EAC1	2023	0	419	4,915,933	306,356,979	4,534,249	277,032,153	972	900
Non-Residential	2	Non-Residential Energy Audit	EAC1	2024	0	2	15,426	306,372,405	12,953	277,045,106	52	43
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2015	1,523	1,523	109,640	109,640	115,122	115,122	187	196
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2016	8,403	9,926	2,248,865	2,358,505	2,361,308	2,476,430	890	934
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2017	5,970	15,896	5,783,157	8,141,662	6,072,315	8,548,745	1,292	1,357
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2018	1,141	17,037	7,065,103	15,206,766	7,418,359	15,967,104	1,657	1,740
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2019	5,897	22,934	7,905,982	23,112,748	8,301,281	24,268,385	1,762	1,850
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2020	1,047	23,981	9,025,941	32,138,690	9,477,239	33,745,624	1,995	2,095
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2021	1,867	25,848	9,413,884	41,552,573	9,813,036	43,558,660	2,079	2,183
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2022	0	25,848	9,586,694	51,139,268	9,951,252	53,509,912	2,230	2,310
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2023	0	25,848	9,586,694	60,725,962	9,951,251	63,461,163	2,159	2,241
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2024	0	25,848	9,586,558	70,312,519	9,951,111	73,412,274	2,162	2,241
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2025	0	25,848	9,586,695	79,899,214	9,951,252	83,363,527	2,230	2,310
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2026	0	25,848	9,586,695	89,485,909	9,951,253	93,314,779	2,230	2,310
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2027	0	25,848	9,586,831	99,072,740	9,951,393	103,266,173	2,191	2,273
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2028	0	25,848	9,586,694	108,659,434	9,951,252	113,217,424	2,254	2,334
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2029	0	25,848	9,478,176	118,137,609	9,837,310	123,054,734	2,162	2,240
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2030	0	24,218	7,348,113	125,485,722	7,600,742	130,655,475	1,980	2,048
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2031	0	15,495	3,810,891	129,296,614	3,886,659	134,542,134	1,239	1,268
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2032	0	9,952	2,583,833	131,880,447	2,598,246	137,140,380	663	663
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2033	0	9,950	2,522,886	134,403,333	2,534,254	139,674,633	653	653
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2034	0	8,736	1,684,460	136,087,793	1,653,906	141,328,539	572	567
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2035	0	2,910	561,560	136,649,353	474,863	141,803,402	206	183
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2036	0	1,867	173,917	136,823,270	139,134	141,942,536	133	107
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2022	4,782	4,733	1,092,585	1,092,585	874,068	874,068	684	547
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2023	0	4,733	3,096,156	4,188,741	2,476,925	3,350,993	1,015	812
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2024	0	4,733	3,096,114	7,284,855	2,476,891	5,827,884	1,014	811
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2025	0	4,733	3,096,157	10,381,012	2,476,925	8,304,810	1,014	811
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2026	0	4,733	3,096,157	13,477,169	2,476,925	10,781,735	1,014	812
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2027	0	4,733	3,077,871	16,555,040	2,462,297	13,244,032	1,015	812
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2028	0	4,621	3,056,420	19,611,460	2,445,136	15,689,168	1,007	806
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2029	0	4,621	3,056,377	22,667,836	2,445,101	18,134,269	1,007	805
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2030	0	4,621	3,056,420	25,724,256	2,445,136	20,579,405	1,006	805
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2031	0	4,621	3,056,420	28,780,677	2,445,136	23,024,541	1,007	775
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2032	0	4,621	2,986,805	31,767,481	2,389,444	25,413,985	1,007	806
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2033	0	4,557	2,857,106	34,624,587	2,285,685	27,699,670	994	795
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2034	0	4,557	2,857,106	37,481,693	2,285,685	29,985,354	994	795
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2035	0	4,557	2,857,074	40,338,766	2,285,659	32,271,013	994	795
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2036	0	4,557	2,856,113	43,194,879	2,284,890	34,555,903	994	795
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2037	0	4,295	2,819,503	46,014,382	2,255,602	36,811,506	993	794
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2038	0	4,191	2,741,427	48,755,809	2,193,141	39,004,647	965	772
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2039	0	4,191	2,741,395	51,497,204	2,193,116	41,197,763	965	772
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2040	0	4,191	2,741,364	54,238,568	2,193,091	43,390,854	964	771
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2041	0	4,191	2,741,395	56,979,963	2,193,116	45,583,971	964	771
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2042	0	4,191	2,542,810	59,522,773	2,034,248	47,618,219	964	771
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2043	0	1,859	2,102,133	61,624,906	1,681,706	49,299,925	885	708
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2044	0	1,859	2,101,660	63,726,566	1,681,328	50,981,253	885	708
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2045	0	1,859	873	63,727,439	698	50,981,952	192	153
Residential	1	Residential Low Income	EALI	2010	1,431	1,431	631,263	631,263	277,705	277,705	621	273
Residential	1	Residential Low Income	EALI	2011	3,912	5,343	4,311,048	4,942,311	1,896,516	2,174,222	1,999	879
Residential	1	Residential Low Income	EALI	2012	2,380	7,723	8,479,059	13,421,370	3,730,108	5,904,329	2,958	1,301
Residential	1	Residential Low Income	EALI	2013	1,883	9,606	10,250,313	23,671,684	4,731,580	10,635,809	3,907	1,721
Residential	1	Residential Low Income	EALI	2014	1,880	11,486	11,883,736	35,555,420	5,779,323	16,415,232	4,540	2,163
Residential	1	Residential Low Income	EALI	2015	0	11,486	12,811,673	48,367,093	6,317,824	22,733,056	5,159	2,523
Residential	1	Residential Low Income	EALI	2016	0	11,486	12,812,079	61,179,172	6,318,026	29,051,082	5,159	2,523
Residential	1	Residential Low Income	EALI	2017	0	11,486	12,811,673	73,990,845	6,317,824	35,368,906	5,159	2,522
Residential	1	Residential Low Income	EALI	2018	0	11,486	12,811,267	86,802,112	6,317,622	41,686,528	5,159	2,523
Residential	1	Residential Low Income	EALI	2019	0	11,486	12,811,672	99,613,784	6,317,823	48,004,351	5,160	2,523
Residential	1	Residential Low Income	EALI	2020	0	11,486	12,811,674	112,425,458	6,317,824	54,322,175	5,158	2,522
Residential	1	Residential Low Income	EALI	2021	0	11,486	12,812,080	125,237,537	6,318,026	60,640,201	5,159	2,523
Residential	1	Residential Low Income	EALI	2022	0	11,486	12,811,673	138,049,211	6,317,824	66,958,025	5,159	2,523
Residential	1	Residential Low Income	EALI	2023	0	11,486	12,811,453	150,860,664	6,317,727	73,275,752	5,159	2,522
Residential	1	Residential Low Income	EALI	2024	0	11,356	11,323,093	162,183,757	5,662,945	78,938,697	5,149	2,518
Residential	1	Residential Low Income	EALI	2025	0	8,510	6,893,398	169,077,154	3,714,256	82,652,953	3,483	1,785
Residential	1	Residential Low Income	EALI	2026	0	4,314	3,513,776	172,590,930	2,200,047	84,853,000	1,585	950



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	2	Non-Residential Energy Audit	EAC1	2023	0	32	1,061,757	12,568,471	873,100	10,736,582	565	449
Non-Residential	2	Non-Residential Energy Audit	EAC1	2024	0	7	163,151	12,731,622	128,364	10,864,945	536	422
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2015	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2016	157	157	20,176	20,176	21,185	21,185	20	21
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2017	130	287	175,564	195,740	184,343	205,527	44	46
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2018	1	288	217,151	412,891	228,009	433,536	60	63
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2019	132	420	244,133	657,024	256,340	689,876	60	63
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2020	19	439	286,429	943,453	300,750	990,626	81	85
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2021	69	508	299,349	1,242,802	312,059	1,302,684	84	88
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2022	0	508	304,282	1,547,084	316,004	1,618,689	87	91
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2023	0	508	304,282	1,851,366	316,004	1,934,693	87	91
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2024	0	508	304,279	2,155,645	316,002	2,250,695	87	91
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2025	0	508	304,282	2,459,926	316,004	2,566,699	87	91
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2026	0	508	304,282	2,764,208	316,004	2,882,704	87	91
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2027	0	508	304,285	3,068,493	316,007	3,198,711	87	91
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2028	0	508	304,282	3,372,774	316,004	3,514,715	87	91
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2029	0	508	304,279	3,677,054	316,002	3,830,717	87	91
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2030	0	508	284,480	3,961,533	295,212	4,125,929	87	91
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2031	0	309	129,098	4,090,631	132,061	4,257,990	53	54
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2032	0	221	87,806	4,178,437	88,705	4,346,695	28	28
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2033	0	220	87,132	4,265,569	87,997	4,434,692	28	28
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2034	0	220	60,250	4,325,819	59,771	4,494,463	28	28
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2035	0	89	17,876	4,343,695	15,279	4,509,742	6	6
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2036	0	71	4,965	4,348,660	3,972	4,513,714	4	3
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2022	26	26	19,687	19,687	15,750	15,750	10	8
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2023	0	26	47,254	66,942	37,803	53,553	13	11
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2024	0	26	47,254	114,196	37,803	91,357	13	11
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2025	0	26	47,254	161,450	37,803	129,160	13	11
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2026	0	26	47,254	208,705	37,803	166,964	13	11
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2027	0	26	45,719	254,423	36,575	203,539	13	11
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2028	0	26	43,798	298,221	35,038	238,577	13	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2029	0	26	43,798	342,019	35,038	273,615	13	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2030	0	26	43,798	385,817	35,038	308,653	13	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2031	0	26	43,798	429,614	35,038	343,691	13	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2032	0	26	42,276	471,891	33,821	377,513	13	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2033	0	26	39,619	511,510	31,695	409,208	12	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2034	0	26	39,619	551,129	31,695	440,903	12	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2035	0	26	39,619	590,748	31,695	472,598	12	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2036	0	26	39,437	630,185	31,550	504,148	12	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2037	0	22	37,821	668,006	30,257	534,405	12	10
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2038	0	22	35,638	703,644	28,510	562,915	11	9
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2039	0	22	35,638	739,282	28,510	591,426	11	9
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2040	0	22	35,638	774,920	28,510	619,936	11	9
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2041	0	22	35,638	810,558	28,510	648,446	11	9
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2042	0	22	27,902	838,460	22,321	670,768	11	9
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2043	0	20	18,720	857,180	14,976	685,744	7	6
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2044	0	20	18,718	875,898	14,974	700,718	7	6
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2045	0	20	1,440	877,338	1,152	701,870	320	256
Residential	1	Residential Low Income	EAL1	2010	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	1	Residential Low Income	EAL1	2011	207	207	40,757	40,757	17,930	17,930	57	25
Residential	1	Residential Low Income	EAL1	2012	156	363	375,908	416,664	165,369	183,299	132	58
Residential	1	Residential Low Income	EAL1	2013	120	483	456,442	873,107	213,283	396,582	167	83
Residential	1	Residential Low Income	EAL1	2014	120	603	566,839	1,439,946	284,566	681,148	202	103
Residential	1	Residential Low Income	EAL1	2015	653	1,256	868,153	2,308,099	459,424	1,140,573	358	194
Residential	1	Residential Low Income	EAL1	2016	0	1,256	1,155,784	3,463,883	626,343	1,766,916	430	233
Residential	1	Residential Low Income	EAL1	2017	0	1,256	1,155,804	4,619,687	626,354	2,393,270	430	233
Residential	1	Residential Low Income	EAL1	2018	0	1,256	1,155,824	5,775,511	626,365	3,019,635	430	233
Residential	1	Residential Low Income	EAL1	2019	0	1,256	1,155,804	6,931,315	626,354	3,645,989	430	220
Residential	1	Residential Low Income	EAL1	2020	0	1,256	1,155,804	8,087,119	626,354	4,272,343	430	233
Residential	1	Residential Low Income	EAL1	2021	0	1,256	1,155,784	9,242,903	626,343	4,898,686	430	233
Residential	1	Residential Low Income	EAL1	2022	0	1,256	1,155,804	10,398,707	626,354	5,525,040	430	233
Residential	1	Residential Low Income	EAL1	2023	0	1,256	1,155,804	11,554,511	626,354	6,151,394	430	233
Residential	1	Residential Low Income	EAL1	2024	0	1,256	1,155,824	12,710,335	626,365	6,777,759	430	233
Residential	1	Residential Low Income	EAL1	2025	0	1,256	1,011,294	13,721,629	562,781	7,340,540	430	233
Residential	1	Residential Low Income	EAL1	2026	0	893	739,065	14,460,694	440,942	7,781,483	273	164



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions				Total								
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	2	Non-Residential Energy Audit	EAC1	2023	0	451	5,977,690	318,925,450	5,407,349	287,768,735	1,537	1,349
Non-Residential	2	Non-Residential Energy Audit	EAC1	2024	0	9	178,577	319,104,027	141,317	287,910,051	588	465
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2015	1,523	1,523	109,640	109,640	115,122	115,122	187	196
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2016	8,560	10,083	2,269,041	2,378,681	2,382,493	2,497,615	910	955
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2017	6,100	16,183	5,958,722	8,337,403	6,256,658	8,754,273	1,336	1,403
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2018	1,142	17,325	7,282,255	15,619,657	7,646,367	16,400,640	1,718	1,803
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2019	6,029	23,354	8,150,115	23,769,772	8,557,621	24,958,261	1,822	1,913
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2020	1,066	24,420	9,312,370	33,082,143	9,777,989	34,736,250	2,076	2,180
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2021	1,936	26,356	9,713,233	42,795,375	10,125,094	44,861,344	2,163	2,271
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2022	0	26,356	9,890,976	52,686,352	10,267,257	55,128,601	2,317	2,401
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2023	0	26,356	9,890,975	62,577,327	10,267,256	65,395,856	2,247	2,332
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2024	0	26,356	9,890,837	72,468,164	10,267,112	75,662,969	2,249	2,331
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2025	0	26,356	9,890,977	82,359,140	10,267,257	85,930,226	2,317	2,401
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2026	0	26,356	9,890,977	92,250,117	10,267,257	96,197,483	2,317	2,401
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2027	0	26,356	9,891,115	102,141,233	10,267,400	106,464,883	2,278	2,363
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2028	0	26,356	9,890,976	112,032,208	10,267,256	116,732,139	2,341	2,424
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2029	0	26,356	9,782,455	121,814,663	10,153,311	126,885,450	2,249	2,331
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2030	0	24,726	7,632,593	129,447,255	7,895,954	134,781,404	2,067	2,138
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2031	0	15,804	3,939,989	133,387,245	4,018,720	138,800,124	1,292	1,322
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2032	0	10,173	2,671,639	136,058,884	2,686,950	141,487,075	691	691
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2033	0	10,170	2,610,018	138,668,902	2,622,251	144,109,325	681	681
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2034	0	8,956	1,744,710	140,413,612	1,713,677	145,823,002	600	596
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2035	0	2,999	579,436	140,993,048	490,142	146,313,144	212	189
Residential	4	Residential Income and Age Qualifying Home Improvement	EAL3	2036	0	1,938	178,882	141,171,930	143,105	146,456,249	137	110
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2022	4,808	4,759	1,112,272	1,112,272	889,818	889,818	694	555
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2023	0	4,759	3,143,411	4,255,683	2,514,729	3,404,546	1,028	822
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2024	0	4,759	3,143,368	7,399,051	2,514,694	5,919,241	1,028	822
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2025	0	4,759	3,143,411	10,542,462	2,514,729	8,433,970	1,028	822
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2026	0	4,759	3,143,411	13,685,873	2,514,729	10,948,699	1,028	822
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2027	0	4,759	3,123,590	16,809,463	2,498,872	13,447,570	1,028	822
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2028	0	4,647	3,100,218	19,909,681	2,480,174	15,927,745	1,020	816
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2029	0	4,647	3,100,174	23,009,855	2,480,140	18,407,884	1,020	816
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2030	0	4,647	3,100,218	26,110,073	2,480,174	20,888,058	1,019	816
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2031	0	4,647	3,100,218	29,210,291	2,480,174	23,368,233	1,020	786
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2032	0	4,647	3,029,081	32,239,372	2,423,265	25,791,498	1,020	816
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2033	0	4,583	2,896,725	35,136,097	2,317,380	28,108,877	1,006	805
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2034	0	4,583	2,896,725	38,032,821	2,317,380	30,426,257	1,006	805
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2035	0	4,583	2,896,693	40,929,514	2,317,354	32,743,611	1,006	805
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2036	0	4,583	2,895,550	43,825,064	2,316,440	35,060,051	1,006	805
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2037	0	4,317	2,857,324	46,682,388	2,285,859	37,345,910	1,005	804
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2038	0	4,213	2,777,065	49,459,453	2,221,652	39,567,562	976	781
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2039	0	4,213	2,777,033	52,236,486	2,221,626	41,789,189	976	781
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2040	0	4,213	2,777,002	55,013,488	2,221,602	44,010,790	975	780
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2041	0	4,213	2,777,033	57,790,521	2,221,627	46,232,417	975	780
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2042	0	4,213	2,570,712	60,361,233	2,056,569	48,288,987	975	780
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2043	0	1,879	2,120,853	62,482,087	1,696,683	49,985,669	892	714
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2044	0	1,879	2,120,378	64,602,464	1,696,302	51,681,971	892	714
Residential	9	Residential Income and Age Qualifying Energy Efficiency	EAL4	2045	0	1,879	2,313	64,604,778	1,851	51,683,822	511	409
Residential	1	Residential Low Income	EAL1	2010	1,431	1,431	631,263	631,263	277,705	277,705	621	273
Residential	1	Residential Low Income	EAL1	2011	4,119	5,550	4,351,805	4,983,068	1,914,446	2,192,151	2,057	905
Residential	1	Residential Low Income	EAL1	2012	2,536	8,086	8,854,967	13,838,035	3,895,477	6,087,628	3,091	1,360
Residential	1	Residential Low Income	EAL1	2013	2,003	10,089	10,706,756	24,544,791	4,944,863	11,032,491	4,075	1,804
Residential	1	Residential Low Income	EAL1	2014	2,000	12,089	12,450,575	36,995,366	6,063,889	17,096,381	4,742	2,266
Residential	1	Residential Low Income	EAL1	2015	653	12,742	13,679,826	50,675,192	6,777,248	23,873,629	5,517	2,716
Residential	1	Residential Low Income	EAL1	2016	0	12,742	13,967,864	64,643,055	6,944,369	30,817,998	5,589	2,755
Residential	1	Residential Low Income	EAL1	2017	0	12,742	13,967,477	78,610,532	6,944,178	37,762,176	5,589	2,755
Residential	1	Residential Low Income	EAL1	2018	0	12,742	13,967,091	92,577,623	6,943,987	44,706,163	5,589	2,755
Residential	1	Residential Low Income	EAL1	2019	0	12,742	13,967,476	106,545,099	6,944,177	51,650,340	5,590	2,743
Residential	1	Residential Low Income	EAL1	2020	0	12,742	13,967,478	120,512,576	6,944,178	58,594,518	5,588	2,755
Residential	1	Residential Low Income	EAL1	2021	0	12,742	13,967,864	134,480,441	6,944,369	65,538,888	5,589	2,755
Residential	1	Residential Low Income	EAL1	2022	0	12,742	13,967,477	148,447,918	6,944,178	72,483,065	5,589	2,755
Residential	1	Residential Low Income	EAL1	2023	0	12,742	13,967,257	162,415,175	6,944,081	79,427,147	5,589	2,755
Residential	1	Residential Low Income	EAL1	2024	0	12,612	12,478,917	174,894,091	6,289,309	85,716,456	5,579	2,751
Residential	1	Residential Low Income	EAL1	2025	0	9,766	7,904,692	182,798,783	4,277,037	89,993,493	3,913	2,018
Residential	1	Residential Low Income	EAL1	2026	0	5,207	4,252,840	187,051,624	2,640,989	92,634,483	1,858	1,114



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA								
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)	
Residential	1	Residential Low Income	EALI	2027	0	2,871	1,993,143	174,584,072	1,199,837	86,052,837	1,010	632	
Residential	1	Residential Low Income	EALI	2028	0	1,100	454,559	175,038,631	263,790	86,316,627	408	237	
Residential	1	Residential Low Income	EALI	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	9	Income and Age Qualifying Solar Program	EALS	2022	7	7	2,285	2,285	1,828	1,828	13	10	
Residential	9	Income and Age Qualifying Solar Program	EALS	2023	0	7	34,559	36,844	27,647	29,475	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2024	0	7	34,559	71,403	27,647	57,123	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2025	0	7	34,559	105,962	27,647	84,770	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2026	0	7	34,559	140,521	27,647	112,417	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2027	0	7	34,559	175,080	27,647	140,064	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2028	0	7	34,559	209,639	27,647	167,711	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2029	0	7	34,559	244,198	27,647	195,359	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2030	0	7	34,559	278,757	27,647	223,006	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2031	0	7	34,559	313,316	27,647	250,653	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2032	0	7	34,559	347,875	27,647	278,300	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2033	0	7	34,559	382,434	27,647	305,947	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2034	0	7	34,559	416,993	27,647	333,595	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2035	0	7	34,559	451,552	27,647	361,242	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2036	0	7	34,559	486,111	27,647	388,889	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2037	0	7	34,559	520,670	27,647	416,536	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2038	0	7	34,559	555,229	27,647	444,183	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2039	0	7	34,559	589,788	27,647	471,831	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2040	0	7	34,559	624,347	27,647	499,478	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2041	0	7	34,559	658,906	27,647	527,125	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2042	0	7	34,559	693,465	27,647	554,772	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2043	0	7	34,559	728,024	27,647	582,419	24	19	
Residential	9	Income and Age Qualifying Solar Program	EALS	2044	0	7	34,559	762,583	27,647	610,067	24	19	
Residential	2	Residential Home Energy Check-up	EARI	2012	31	31	1,895	1,895	2,393	2,393	4	5	
Residential	2	Residential Home Energy Check-up	EARI	2013	1,569	1,600	229,921	231,816	290,344	292,737	204	258	
Residential	2	Residential Home Energy Check-up	EARI	2014	19,703	21,303	4,983,314	5,215,129	6,292,929	6,585,665	1,987	2,509	
Residential	2	Residential Home Energy Check-up	EARI	2015	13,860	35,163	15,088,217	20,303,347	19,053,401	25,639,066	3,692	4,662	
Residential	2	Residential Home Energy Check-up	EARI	2016	15,252	50,415	21,832,551	42,135,898	27,570,146	53,209,212	5,173	6,532	
Residential	2	Residential Home Energy Check-up	EARI	2017	1,500	51,915	26,125,258	68,261,156	32,990,975	86,200,187	7,203	9,096	
Residential	2	Residential Home Energy Check-up	EARI	2018	0	51,915	26,193,696	94,454,851	33,077,399	119,277,586	7,218	9,115	
Residential	2	Residential Home Energy Check-up	EARI	2019	0	51,915	26,193,887	120,648,739	33,077,641	152,355,227	7,219	9,116	
Residential	2	Residential Home Energy Check-up	EARI	2020	0	51,915	26,193,888	146,842,627	33,077,642	185,432,869	6,968	8,799	
Residential	2	Residential Home Energy Check-up	EARI	2021	0	51,915	26,194,082	173,036,708	33,077,886	218,510,755	7,214	9,110	
Residential	2	Residential Home Energy Check-up	EARI	2022	0	51,915	26,192,067	199,228,775	33,075,342	251,586,097	7,214	9,110	
Residential	2	Residential Home Energy Check-up	EARI	2023	0	51,862	25,965,824	225,194,600	32,789,643	284,375,740	7,203	9,096	
Residential	2	Residential Home Energy Check-up	EARI	2024	0	49,774	21,236,890	246,431,490	26,817,945	311,193,685	6,562	8,287	
Residential	2	Residential Home Energy Check-up	EARI	2025	0	28,783	11,124,431	257,555,921	14,047,931	325,241,616	3,599	4,545	
Residential	2	Residential Home Energy Check-up	EARI	2026	0	16,015	4,380,768	261,936,688	5,532,033	330,773,650	1,909	2,410	
Residential	2	Residential Home Energy Check-up	EARI	2027	0	431	71,445	262,008,133	90,221	330,863,870	160	202	
Residential	2	Residential Heat Pump Tune-up	HPTU	2012	1,212	1,212	49,069	49,069	43,721	43,721	120	107	
Residential	2	Residential Heat Pump Tune-up	HPTU	2013	15,633	16,845	2,360,784	2,409,853	2,103,458	2,147,179	2,131	1,899	
Residential	2	Residential Heat Pump Tune-up	HPTU	2014	24,687	41,532	7,457,032	9,866,885	6,644,215	8,791,394	5,031	4,483	
Residential	2	Residential Heat Pump Tune-up	HPTU	2015	24,114	65,646	13,898,913	23,765,798	12,383,932	21,175,326	7,246	6,456	
Residential	2	Residential Heat Pump Tune-up	HPTU	2016	19,008	84,654	18,215,028	41,980,826	16,229,590	37,404,916	8,182	7,290	
Residential	2	Residential Heat Pump Tune-up	HPTU	2017	2,472	87,126	20,774,863	62,755,690	18,510,403	55,915,320	9,502	8,466	
Residential	2	Residential Heat Pump Tune-up	HPTU	2018	0	85,378	18,492,425	81,248,115	16,476,751	72,392,071	9,361	8,341	
Residential	2	Residential Heat Pump Tune-up	HPTU	2019	0	69,286	13,402,823	94,650,938	11,941,915	84,333,986	6,341	5,650	
Residential	2	Residential Heat Pump Tune-up	HPTU	2020	0	43,626	6,958,833	101,609,771	6,200,320	90,534,306	3,329	2,967	
Residential	2	Residential Heat Pump Tune-up	HPTU	2021	0	19,719	2,643,547	104,253,318	2,355,400	92,889,706	1,564	1,394	
Residential	2	Residential Heat Pump Tune-up	HPTU	2022	0	251	22,331	104,275,649	19,897	92,909,604	96	85	
Residential	7	Residential Appliance Recycling	RAR2	2019	1,579	1,579	198,846	198,846	119,307	119,307	148	89	
Residential	7	Residential Appliance Recycling	RAR2	2020	972	2,551	1,811,915	2,010,761	1,087,149	1,206,457	286	172	
Residential	7	Residential Appliance Recycling	RAR2	2021	0	2,551	2,123,600	4,134,361	1,274,160	2,480,616	330	198	
Residential	7	Residential Appliance Recycling	RAR2	2022	2,478	5,029	2,847,696	6,982,057	1,708,618	4,189,234	460	276	
Residential	7	Residential Appliance Recycling	RAR2	2023	0	5,029	3,591,180	10,573,237	2,154,708	6,343,942	559	335	
Residential	7	Residential Appliance Recycling	RAR2	2024	0	5,029	3,591,187	14,164,423	2,154,712	8,498,654	559	335	
Residential	7	Residential Appliance Recycling	RAR2	2025	0	5,029	3,591,180	17,755,603	2,154,708	10,653,362	559	335	
Residential	7	Residential Appliance Recycling	RAR2	2026	0	5,029	3,591,180	21,346,783	2,154,708	12,808,070	559	335	



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions				NC								
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	1	Residential Low Income	EALI	2027	0	848	667,005	15,127,698	391,111	8,172,594	258	153
Residential	1	Residential Low Income	EALI	2028	0	721	532,044	15,659,743	308,756	8,481,350	213	124
Residential	1	Residential Low Income	EALI	2029	0	375	140,078	15,799,821	81,290	8,562,640	130	75
Residential	9	Income and Age Qualifying Solar Program	EALS	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2040	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2041	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2042	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2043	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Income and Age Qualifying Solar Program	EALS	2044	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Home Energy Check-up	EAR1	2012	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Home Energy Check-up	EAR1	2013	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Home Energy Check-up	EAR1	2014	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Home Energy Check-up	EAR1	2015	996	996	377,969	377,969	477,299	477,299	128	162
Residential	2	Residential Home Energy Check-up	EAR1	2016	4	1,000	594,551	972,520	750,799	1,228,098	165	208
Residential	2	Residential Home Energy Check-up	EAR1	2017	49	1,049	625,230	1,597,749	789,540	2,017,638	178	225
Residential	2	Residential Home Energy Check-up	EAR1	2018	0	1,049	629,707	2,227,456	795,194	2,812,832	179	226
Residential	2	Residential Home Energy Check-up	EAR1	2019	0	1,049	629,715	2,857,171	795,204	3,608,036	179	226
Residential	2	Residential Home Energy Check-up	EAR1	2020	0	1,049	629,715	3,486,887	795,204	4,403,240	173	219
Residential	2	Residential Home Energy Check-up	EAR1	2021	0	1,049	629,724	4,116,610	795,215	5,198,456	179	226
Residential	2	Residential Home Energy Check-up	EAR1	2022	0	1,049	629,715	4,746,326	795,205	5,993,660	179	226
Residential	2	Residential Home Energy Check-up	EAR1	2023	0	1,049	629,715	5,376,041	795,205	6,788,865	179	226
Residential	2	Residential Home Energy Check-up	EAR1	2024	0	1,049	629,707	6,005,748	795,194	7,584,058	173	219
Residential	2	Residential Home Energy Check-up	EAR1	2025	0	1,049	253,050	6,258,798	319,552	7,903,610	179	226
Residential	2	Residential Home Energy Check-up	EAR1	2026	0	50	35,178	6,293,976	44,422	7,948,032	9	11
Residential	2	Residential Home Energy Check-up	EAR1	2027	0	44	4,595	6,298,571	5,803	7,953,835	8	10
Residential	2	Residential Heat Pump Tune-up	HPTU	2012	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Heat Pump Tune-up	HPTU	2013	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Heat Pump Tune-up	HPTU	2014	581	581	27,166	27,166	24,205	24,205	57	51
Residential	2	Residential Heat Pump Tune-up	HPTU	2015	3,307	3,888	685,507	712,673	610,787	634,992	481	428
Residential	2	Residential Heat Pump Tune-up	HPTU	2016	1,274	5,162	1,163,570	1,876,243	1,036,741	1,671,733	722	643
Residential	2	Residential Heat Pump Tune-up	HPTU	2017	125	5,287	1,350,944	3,227,187	1,203,691	2,875,424	777	693
Residential	2	Residential Heat Pump Tune-up	HPTU	2018	0	5,287	1,353,268	4,580,455	1,205,762	4,081,185	777	692
Residential	2	Residential Heat Pump Tune-up	HPTU	2019	0	5,287	1,326,613	5,907,068	1,182,012	5,263,198	777	692
Residential	2	Residential Heat Pump Tune-up	HPTU	2020	0	4,258	670,222	6,577,291	597,168	5,860,366	327	292
Residential	2	Residential Heat Pump Tune-up	HPTU	2021	0	1,305	190,841	6,768,131	170,039	6,030,405	124	110
Residential	2	Residential Heat Pump Tune-up	HPTU	2022	0	45	2,426	6,770,558	2,162	6,032,567	6	5
Residential	7	Residential Appliance Recycling	RAR2	2019	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	7	Residential Appliance Recycling	RAR2	2020	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	7	Residential Appliance Recycling	RAR2	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	7	Residential Appliance Recycling	RAR2	2022	19	19	7,664	7,664	4,599	4,599	2	1
Residential	7	Residential Appliance Recycling	RAR2	2023	0	19	14,260	21,924	8,556	13,154	2	1
Residential	7	Residential Appliance Recycling	RAR2	2024	0	19	14,260	36,184	8,556	21,710	2	1
Residential	7	Residential Appliance Recycling	RAR2	2025	0	19	14,260	50,443	8,556	30,266	2	1
Residential	7	Residential Appliance Recycling	RAR2	2026	0	19	14,260	64,703	8,556	38,822	2	1



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	1	Residential Low Income	EALI	2027	0	3,719	2,660,147	189,711,771	1,590,948	94,225,431	1,267	785
Residential	1	Residential Low Income	EALI	2028	0	1,821	986,603	190,698,374	572,546	94,797,977	620	360
Residential	1	Residential Low Income	EALI	2029	0	375	140,078	15,799,821	81,290	8,562,640	130	75
Residential	9	Income and Age Qualifying Solar Program	EALS	2022	7	7	2,285	2,285	1,828	1,828	13	10
Residential	9	Income and Age Qualifying Solar Program	EALS	2023	0	7	34,559	36,844	27,647	29,475	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2024	0	7	34,559	71,403	27,647	57,123	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2025	0	7	34,559	105,962	27,647	84,770	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2026	0	7	34,559	140,521	27,647	112,417	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2027	0	7	34,559	175,080	27,647	140,064	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2028	0	7	34,559	209,639	27,647	167,711	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2029	0	7	34,559	244,198	27,647	195,359	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2030	0	7	34,559	278,757	27,647	223,006	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2031	0	7	34,559	313,316	27,647	250,653	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2032	0	7	34,559	347,875	27,647	278,300	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2033	0	7	34,559	382,434	27,647	305,947	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2034	0	7	34,559	416,993	27,647	333,595	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2035	0	7	34,559	451,552	27,647	361,242	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2036	0	7	34,559	486,111	27,647	388,889	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2037	0	7	34,559	520,670	27,647	416,536	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2038	0	7	34,559	555,229	27,647	444,183	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2039	0	7	34,559	589,788	27,647	471,831	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2040	0	7	34,559	624,347	27,647	499,478	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2041	0	7	34,559	658,906	27,647	527,125	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2042	0	7	34,559	693,465	27,647	554,772	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2043	0	7	34,559	728,024	27,647	582,419	24	19
Residential	9	Income and Age Qualifying Solar Program	EALS	2044	0	7	34,559	762,583	27,647	610,067	24	19
Residential	2	Residential Home Energy Check-up	EAR1	2012	31	31	1,895	1,895	2,393	2,393	4	5
Residential	2	Residential Home Energy Check-up	EAR1	2013	1,569	1,600	229,921	231,816	290,344	292,737	204	258
Residential	2	Residential Home Energy Check-up	EAR1	2014	19,703	21,303	4,983,314	5,215,129	6,292,929	6,585,665	1,987	2,509
Residential	2	Residential Home Energy Check-up	EAR1	2015	14,856	36,159	15,466,186	20,681,315	19,530,700	26,116,365	3,820	4,824
Residential	2	Residential Home Energy Check-up	EAR1	2016	15,256	51,415	22,427,102	43,108,418	28,320,945	54,437,310	5,337	6,740
Residential	2	Residential Home Energy Check-up	EAR1	2017	1,549	52,964	26,750,487	69,858,905	33,780,515	88,217,825	7,381	9,321
Residential	2	Residential Home Energy Check-up	EAR1	2018	0	52,964	26,823,403	96,682,307	33,872,593	122,090,418	7,398	9,342
Residential	2	Residential Home Energy Check-up	EAR1	2019	0	52,964	26,823,603	123,505,910	33,872,845	155,963,263	7,398	9,342
Residential	2	Residential Home Energy Check-up	EAR1	2020	0	52,964	26,823,603	150,329,513	33,872,846	189,836,109	7,141	9,017
Residential	2	Residential Home Energy Check-up	EAR1	2021	0	52,964	26,823,805	177,153,319	33,873,101	223,709,211	7,393	9,336
Residential	2	Residential Home Energy Check-up	EAR1	2022	0	52,964	26,821,782	203,975,101	33,870,547	257,579,757	7,393	9,336
Residential	2	Residential Home Energy Check-up	EAR1	2023	0	52,911	26,595,540	230,570,641	33,584,847	291,164,605	7,382	9,322
Residential	2	Residential Home Energy Check-up	EAR1	2024	0	50,823	21,866,597	252,437,238	27,613,139	318,777,744	6,735	8,506
Residential	2	Residential Home Energy Check-up	EAR1	2025	0	29,832	11,377,481	263,814,718	14,367,483	333,145,226	3,778	4,771
Residential	2	Residential Home Energy Check-up	EAR1	2026	0	16,065	4,415,945	268,230,664	5,576,456	338,721,682	1,917	2,421
Residential	2	Residential Home Energy Check-up	EAR1	2027	0	475	76,040	268,306,704	96,023	338,817,706	168	212
Residential	2	Residential Heat Pump Tune-up	HPTU	2012	1,212	1,212	49,069	49,069	43,721	43,721	120	107
Residential	2	Residential Heat Pump Tune-up	HPTU	2013	15,633	16,845	2,360,784	2,409,853	2,103,458	2,147,179	2,131	1,899
Residential	2	Residential Heat Pump Tune-up	HPTU	2014	25,268	42,113	7,484,198	9,894,051	6,668,420	8,815,599	5,089	4,534
Residential	2	Residential Heat Pump Tune-up	HPTU	2015	27,421	69,534	14,584,421	24,478,471	12,994,719	21,810,318	7,726	6,884
Residential	2	Residential Heat Pump Tune-up	HPTU	2016	20,282	89,816	19,378,598	43,857,069	17,266,331	39,076,649	8,903	7,933
Residential	2	Residential Heat Pump Tune-up	HPTU	2017	2,597	92,413	22,125,808	65,982,877	19,714,094	58,790,743	10,279	9,159
Residential	2	Residential Heat Pump Tune-up	HPTU	2018	0	90,665	19,845,693	85,828,570	17,682,513	76,473,256	10,138	9,033
Residential	2	Residential Heat Pump Tune-up	HPTU	2019	0	74,573	14,729,436	100,558,006	13,123,928	89,597,184	7,118	6,342
Residential	2	Residential Heat Pump Tune-up	HPTU	2020	0	47,884	7,629,056	108,187,062	6,797,489	96,394,672	3,657	3,258
Residential	2	Residential Heat Pump Tune-up	HPTU	2021	0	21,024	2,834,388	111,021,450	2,525,439	98,920,112	1,688	1,504
Residential	2	Residential Heat Pump Tune-up	HPTU	2022	0	296	24,758	111,046,207	22,059	98,942,171	102	91
Residential	7	Residential Appliance Recycling	RAR2	2019	1,579	1,579	198,846	198,846	119,307	119,307	148	89
Residential	7	Residential Appliance Recycling	RAR2	2020	972	2,551	1,811,915	2,010,761	1,087,149	1,206,457	286	172
Residential	7	Residential Appliance Recycling	RAR2	2021	0	2,551	2,123,600	4,134,361	1,274,160	2,480,616	330	198
Residential	7	Residential Appliance Recycling	RAR2	2022	2,497	5,048	2,855,361	6,989,721	1,713,216	4,193,833	462	277
Residential	7	Residential Appliance Recycling	RAR2	2023	0	5,048	3,605,439	10,595,161	2,163,264	6,357,096	561	337
Residential	7	Residential Appliance Recycling	RAR2	2024	0	5,048	3,605,446	14,200,607	2,163,268	8,520,364	561	337
Residential	7	Residential Appliance Recycling	RAR2	2025	0	5,048	3,605,439	17,806,046	2,163,264	10,683,628	561	337
Residential	7	Residential Appliance Recycling	RAR2	2026	0	5,048	3,605,439	21,411,485	2,163,263	12,846,891	561	337



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA								
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)	
Residential	7	Residential Appliance Recycling	RAR2	2027	0	5,029	3,395,635	24,742,417	2,037,381	14,845,450	559	325	
Residential	7	Residential Appliance Recycling	RAR2	2028	0	3,162	1,781,501	26,523,919	1,068,901	15,914,351	284	171	
Residential	7	Residential Appliance Recycling	RAR2	2029	0	2,478	1,467,579	27,991,498	880,547	16,794,899	229	137	
Residential	7	Residential Appliance Recycling	RAR2	2030	0	2,308	747,420	28,738,918	448,452	17,243,351	175	105	
Residential	4	Residential Appliance Recycling	RARC	2015	3,141	3,141	635,135	635,135	489,054	489,054	420	323	
Residential	4	Residential Appliance Recycling	RARC	2016	7,734	10,875	6,878,035	7,513,170	5,296,087	5,785,141	1,369	1,054	
Residential	4	Residential Appliance Recycling	RARC	2017	3,129	14,004	13,544,812	21,057,982	10,429,505	16,214,646	2,196	1,691	
Residential	4	Residential Appliance Recycling	RARC	2018	0	14,004	14,186,644	35,244,626	10,923,716	27,138,362	2,196	1,691	
Residential	4	Residential Appliance Recycling	RARC	2019	0	14,004	14,186,604	49,431,230	10,923,685	38,062,047	2,196	1,691	
Residential	4	Residential Appliance Recycling	RARC	2020	0	14,004	14,186,604	63,617,834	10,923,685	48,985,732	2,196	1,691	
Residential	4	Residential Appliance Recycling	RARC	2021	0	14,004	14,186,564	77,804,398	10,923,654	59,909,386	2,195	1,691	
Residential	4	Residential Appliance Recycling	RARC	2022	0	14,004	14,186,604	91,991,002	10,923,685	70,833,071	2,195	1,691	
Residential	4	Residential Appliance Recycling	RARC	2023	0	14,004	13,560,702	105,551,704	10,441,741	81,274,812	2,196	1,691	
Residential	4	Residential Appliance Recycling	RARC	2024	0	10,657	7,329,625	112,881,329	5,643,811	86,918,623	1,375	1,059	
Residential	4	Residential Appliance Recycling	RARC	2025	0	2,314	649,687	113,531,016	500,259	87,418,883	364	280	
Residential	8	Residential Customer Engagement	RCEB	2021	286,456	302,983	45,901,546	45,901,546	3,672,124	3,672,124	15,753	1,260	
Residential	8	Residential Customer Engagement	RCEB	2022	263,463	285,071	55,912,649	101,814,195	8,383,821	12,055,945	26,342	3,124	
Residential	8	Residential Customer Engagement	RCEB	2023	307,895	307,901	10,150,065	113,651,882	1,725,511	14,068,352	18,383	3,125	
Residential	2	Residential Duct Sealing	RDUC	2012	8	8	1,995	1,995	782	782	5	2	
Residential	2	Residential Duct Sealing	RDUC	2013	108	116	68,775	70,770	26,960	27,742	57	22	
Residential	2	Residential Duct Sealing	RDUC	2014	401	517	196,047	266,817	76,850	104,592	154	61	
Residential	2	Residential Duct Sealing	RDUC	2015	1,860	2,377	861,183	1,128,001	337,584	442,176	606	238	
Residential	2	Residential Duct Sealing	RDUC	2016	658	3,035	1,595,278	2,723,279	625,349	1,067,525	847	332	
Residential	2	Residential Duct Sealing	RDUC	2017	264	3,299	1,923,851	4,647,130	754,150	1,821,675	968	379	
Residential	2	Residential Duct Sealing	RDUC	2018	0	3,299	1,934,668	6,581,798	758,390	2,580,065	989	388	
Residential	2	Residential Duct Sealing	RDUC	2019	0	3,299	1,934,697	8,516,495	758,401	3,338,466	989	388	
Residential	2	Residential Duct Sealing	RDUC	2020	0	3,299	1,934,697	10,451,192	758,401	4,096,867	989	327	
Residential	2	Residential Duct Sealing	RDUC	2021	0	3,299	1,934,725	12,385,917	758,412	4,855,279	989	388	
Residential	2	Residential Duct Sealing	RDUC	2022	0	3,299	1,934,697	14,320,614	758,401	5,613,681	989	388	
Residential	2	Residential Duct Sealing	RDUC	2023	0	3,299	1,934,697	16,255,310	758,401	6,372,082	989	388	
Residential	2	Residential Duct Sealing	RDUC	2024	0	3,299	1,934,668	18,189,979	758,390	7,130,472	989	388	
Residential	2	Residential Duct Sealing	RDUC	2025	0	3,299	1,934,697	20,124,676	758,401	7,888,873	989	388	
Residential	2	Residential Duct Sealing	RDUC	2026	0	3,299	1,934,697	22,059,372	758,401	8,647,274	989	388	
Residential	2	Residential Duct Sealing	RDUC	2027	0	3,299	1,934,725	23,994,098	758,412	9,405,686	989	388	
Residential	2	Residential Duct Sealing	RDUC	2028	0	3,299	1,934,697	25,928,794	758,401	10,164,087	989	388	
Residential	2	Residential Duct Sealing	RDUC	2029	0	3,299	1,934,668	27,863,463	758,390	10,922,477	989	388	
Residential	2	Residential Duct Sealing	RDUC	2030	0	3,299	1,932,741	29,796,204	757,634	11,680,112	989	388	
Residential	2	Residential Duct Sealing	RDUC	2031	0	3,291	1,866,210	31,662,413	731,554	12,411,666	982	385	
Residential	2	Residential Duct Sealing	RDUC	2032	0	3,168	1,739,055	33,401,468	681,709	13,093,375	905	355	
Residential	2	Residential Duct Sealing	RDUC	2033	0	2,676	1,076,438	34,477,907	421,964	13,515,339	735	288	
Residential	2	Residential Duct Sealing	RDUC	2034	0	869	340,571	34,818,478	133,504	13,648,843	161	63	
Residential	2	Residential Duct Sealing	RDUC	2035	0	163	11,081	34,829,559	4,344	13,653,187	21	8	
Residential	7	Residential Efficient Products Marketplace	REEC	2019	2,785,850	2,785,850	15,316,907	15,316,907	10,721,834	10,721,834	17,384	12,169	
Residential	7	Residential Efficient Products Marketplace	REEC	2020	2,596,966	5,382,816	126,082,771	141,399,677	86,975,116	97,696,950	36,989	25,690	
Residential	7	Residential Efficient Products Marketplace	REEC	2021	4,263,855	9,646,671	230,072,991	371,472,668	145,872,440	243,569,390	65,835	40,489	
Residential	7	Residential Efficient Products Marketplace	REEC	2022	5,163,385	14,810,056	368,043,618	739,516,286	214,737,466	458,306,856	102,613	59,519	
Residential	7	Residential Efficient Products Marketplace	REEC	2023	0	14,810,056	443,616,419	1,183,132,705	252,737,127	711,043,983	102,623	59,525	
Residential	7	Residential Efficient Products Marketplace	REEC	2024	0	14,810,056	443,616,367	1,626,749,072	252,736,775	963,780,757	102,645	59,538	
Residential	7	Residential Efficient Products Marketplace	REEC	2025	0	14,810,056	443,616,420	2,070,365,492	252,737,126	1,216,517,883	102,639	59,534	
Residential	7	Residential Efficient Products Marketplace	REEC	2026	0	14,810,056	443,616,411	2,513,981,903	252,737,121	1,469,255,004	102,635	59,532	
Residential	7	Residential Efficient Products Marketplace	REEC	2027	0	14,810,056	443,616,464	2,957,598,367	252,737,473	1,721,992,477	102,614	59,520	
Residential	7	Residential Efficient Products Marketplace	REEC	2028	0	14,810,056	443,616,434	3,401,214,801	252,737,134	1,974,729,611	102,613	59,519	
Residential	7	Residential Efficient Products Marketplace	REEC	2029	0	14,810,056	443,616,366	3,844,831,167	252,736,775	2,227,466,386	102,641	59,535	
Residential	7	Residential Efficient Products Marketplace	REEC	2030	0	14,810,056	443,616,413	4,288,447,580	252,737,123	2,480,203,509	102,641	59,536	
Residential	7	Residential Efficient Products Marketplace	REEC	2031	0	14,810,056	443,616,412	4,732,063,992	252,737,122	2,732,940,631	102,639	59,534	
Residential	7	Residential Efficient Products Marketplace	REEC	2032	0	14,810,056	443,616,449	5,175,680,441	252,737,465	2,985,678,096	102,625	59,526	
Residential	7	Residential Efficient Products Marketplace	REEC	2033	0	14,810,056	443,616,438	5,619,296,879	252,737,135	3,238,415,231	102,613	59,519	
Residential	7	Residential Efficient Products Marketplace	REEC	2034	0	14,810,056	443,616,417	6,062,913,296	252,737,126	3,491,152,357	102,623	59,525	
Residential	7	Residential Efficient Products Marketplace	REEC	2035	0	14,810,056	443,616,370	6,506,529,666	252,736,775	3,743,889,132	102,641	59,535	
Residential	7	Residential Efficient Products Marketplace	REEC	2036	0	14,810,056	388,288,159	6,894,817,824	214,232,632	3,958,121,764	96,363	55,846	
Residential	7	Residential Efficient Products Marketplace	REEC	2037	0	10,698,035	278,277,550	7,173,095,374	141,528,394	4,099,650,158	72,331	39,038	
Residential	7	Residential Efficient Products Marketplace	REEC	2038	0	7,401,725	160,059,694	7,333,155,069	80,317,836	4,179,967,994	50,894	26,261	
Residential	7	Residential Efficient Products Marketplace	REEC	2039	0	2,592,482	27,027,320	7,360,182,388	13,589,354	4,193,557,348	20,138	10,431	
Residential	8	Residential Electric Vehicle Rewards	REVDR	2021	0	0	0	0	0	0	0	0	
Residential	8	Residential Electric Vehicle Rewards	REVDR	2022	0	0	0	0	0	0	0	0	
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2021	93	93	2,372	2,372	1,898	1,898	5	4	



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	7	Residential Appliance Recycling	RAR2	2027	0	19	14,259	78,962	8,556	47,377	2	1
Residential	7	Residential Appliance Recycling	RAR2	2028	0	19	14,260	93,222	8,556	55,933	2	1
Residential	7	Residential Appliance Recycling	RAR2	2029	0	19	14,260	107,481	8,556	64,489	2	1
Residential	7	Residential Appliance Recycling	RAR2	2030	0	19	6,636	114,117	3,982	68,470	2	1
Residential	4	Residential Appliance Recycling	RARC	2015	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2016	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2017	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2018	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2019	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2020	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	4	Residential Appliance Recycling	RARC	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Customer Engagement	RCEB	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Customer Engagement	RCEB	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Customer Engagement	RCEB	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Duct Sealing	RDOC	2012	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Duct Sealing	RDOC	2013	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Duct Sealing	RDOC	2014	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Duct Sealing	RDOC	2015	323	323	107,465	107,465	42,126	42,126	87	34
Residential	2	Residential Duct Sealing	RDOC	2016	217	540	277,505	384,971	108,782	150,908	124	49
Residential	2	Residential Duct Sealing	RDOC	2017	14	554	338,196	723,167	132,573	283,481	159	62
Residential	2	Residential Duct Sealing	RDOC	2018	0	554	338,605	1,061,772	132,733	416,214	160	63
Residential	2	Residential Duct Sealing	RDOC	2019	0	554	338,593	1,400,364	132,728	548,943	160	63
Residential	2	Residential Duct Sealing	RDOC	2020	0	554	338,593	1,738,957	132,728	681,671	160	63
Residential	2	Residential Duct Sealing	RDOC	2021	0	554	338,581	2,077,538	132,724	814,395	160	63
Residential	2	Residential Duct Sealing	RDOC	2022	0	554	338,593	2,416,131	132,728	947,123	160	63
Residential	2	Residential Duct Sealing	RDOC	2023	0	554	338,593	2,754,724	132,728	1,079,852	160	63
Residential	2	Residential Duct Sealing	RDOC	2024	0	554	338,605	3,093,328	132,733	1,212,585	160	63
Residential	2	Residential Duct Sealing	RDOC	2025	0	554	338,593	3,431,921	132,728	1,345,313	160	63
Residential	2	Residential Duct Sealing	RDOC	2026	0	554	338,593	3,770,514	132,728	1,478,041	160	63
Residential	2	Residential Duct Sealing	RDOC	2027	0	554	338,581	4,109,095	132,724	1,610,765	160	63
Residential	2	Residential Duct Sealing	RDOC	2028	0	554	338,593	4,447,688	132,728	1,743,494	160	63
Residential	2	Residential Duct Sealing	RDOC	2029	0	554	338,605	4,786,292	132,733	1,876,226	160	63
Residential	2	Residential Duct Sealing	RDOC	2030	0	554	338,593	5,124,885	132,728	2,008,955	160	63
Residential	2	Residential Duct Sealing	RDOC	2031	0	554	338,593	5,463,478	132,728	2,141,683	160	63
Residential	2	Residential Duct Sealing	RDOC	2032	0	554	338,581	5,802,059	132,724	2,274,407	160	63
Residential	2	Residential Duct Sealing	RDOC	2033	0	553	231,502	6,033,561	90,749	2,365,156	160	63
Residential	2	Residential Duct Sealing	RDOC	2034	0	230	61,423	6,094,984	24,078	2,389,234	48	19
Residential	2	Residential Duct Sealing	RDOC	2035	0	6	404	6,095,388	158	2,389,392	1	0
Residential	7	Residential Efficient Products Marketplace	REEC	2019	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	7	Residential Efficient Products Marketplace	REEC	2020	86,493	86,493	1,223,285	1,223,285	815,799	815,799	551	369
Residential	7	Residential Efficient Products Marketplace	REEC	2021	116,668	203,161	4,590,319	5,813,604	2,674,769	3,490,569	1,310	732
Residential	7	Residential Efficient Products Marketplace	REEC	2022	84,301	287,462	7,483,037	13,296,640	4,021,626	7,512,194	1,894	1,008
Residential	7	Residential Efficient Products Marketplace	REEC	2023	0	287,462	9,116,791	22,413,431	4,799,150	12,311,344	1,992	1,043
Residential	7	Residential Efficient Products Marketplace	REEC	2024	0	287,462	9,116,923	31,530,354	4,799,209	17,110,553	1,993	1,043
Residential	7	Residential Efficient Products Marketplace	REEC	2025	0	287,462	9,116,791	40,647,146	4,799,150	21,909,702	1,993	1,043
Residential	7	Residential Efficient Products Marketplace	REEC	2026	0	287,462	9,116,791	49,763,937	4,799,150	26,708,852	1,894	1,009
Residential	7	Residential Efficient Products Marketplace	REEC	2027	0	287,462	9,116,659	58,880,596	4,799,091	31,507,943	1,994	1,044
Residential	7	Residential Efficient Products Marketplace	REEC	2028	0	287,462	9,116,792	67,997,388	4,799,150	36,307,093	1,992	1,043
Residential	7	Residential Efficient Products Marketplace	REEC	2029	0	287,462	9,116,923	77,114,311	4,799,209	41,106,301	1,993	1,043
Residential	7	Residential Efficient Products Marketplace	REEC	2030	0	287,462	9,116,791	86,231,102	4,799,150	45,905,451	1,993	1,043
Residential	7	Residential Efficient Products Marketplace	REEC	2031	0	287,462	9,116,791	95,347,893	4,799,150	50,704,601	1,993	1,043
Residential	7	Residential Efficient Products Marketplace	REEC	2032	0	287,462	9,116,658	104,464,552	4,799,090	55,503,691	1,995	1,044
Residential	7	Residential Efficient Products Marketplace	REEC	2033	0	287,462	9,116,792	113,581,344	4,799,150	60,302,841	1,994	1,044
Residential	7	Residential Efficient Products Marketplace	REEC	2034	0	287,462	9,116,791	122,698,135	4,799,150	65,101,991	1,992	1,043
Residential	7	Residential Efficient Products Marketplace	REEC	2035	0	287,462	9,116,924	131,815,059	4,799,209	69,901,200	1,993	1,043
Residential	7	Residential Efficient Products Marketplace	REEC	2036	0	287,462	8,937,441	140,752,500	4,677,719	74,578,919	1,878	977
Residential	7	Residential Efficient Products Marketplace	REEC	2037	0	247,417	6,586,660	147,339,160	3,191,153	77,770,072	1,637	790
Residential	7	Residential Efficient Products Marketplace	REEC	2038	0	135,015	3,200,037	150,539,196	1,507,205	79,277,278	959	430
Residential	7	Residential Efficient Products Marketplace	REEC	2039	0	48,080	667,273	151,206,469	320,436	79,597,713	413	190
Residential	8	Residential Electric Vehicle Rewards	REVDR	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Rewards	REVDR	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	7	Residential Appliance Recycling	RAR2	2027	0	5,048	3,409,894	24,821,379	2,045,937	14,892,828	561	326
Residential	7	Residential Appliance Recycling	RAR2	2028	0	3,181	1,795,761	26,617,140	1,077,457	15,970,284	286	172
Residential	7	Residential Appliance Recycling	RAR2	2029	0	2,497	1,481,839	28,098,979	889,103	16,859,387	231	138
Residential	7	Residential Appliance Recycling	RAR2	2030	0	2,327	754,056	28,853,035	452,434	17,311,821	177	106
Residential	4	Residential Appliance Recycling	RARC	2015	3,141	3,141	635,135	635,135	489,054	489,054	420	323
Residential	4	Residential Appliance Recycling	RARC	2016	7,734	10,875	6,878,035	7,513,170	5,296,087	5,785,141	1,369	1,054
Residential	4	Residential Appliance Recycling	RARC	2017	3,129	14,004	13,544,812	21,057,982	10,429,505	16,214,646	2,196	1,691
Residential	4	Residential Appliance Recycling	RARC	2018	0	14,004	14,186,644	35,244,626	10,923,716	27,138,362	2,196	1,691
Residential	4	Residential Appliance Recycling	RARC	2019	0	14,004	14,186,604	49,431,230	10,923,685	38,062,047	2,196	1,691
Residential	4	Residential Appliance Recycling	RARC	2020	0	14,004	14,186,604	63,617,834	10,923,685	48,985,732	2,196	1,691
Residential	4	Residential Appliance Recycling	RARC	2021	0	14,004	14,186,564	77,804,398	10,923,654	59,909,386	2,195	1,691
Residential	4	Residential Appliance Recycling	RARC	2022	0	14,004	14,186,604	91,991,002	10,923,685	70,833,071	2,195	1,691
Residential	4	Residential Appliance Recycling	RARC	2023	0	14,004	13,560,702	105,551,704	10,441,741	81,274,812	2,196	1,691
Residential	4	Residential Appliance Recycling	RARC	2024	0	10,657	7,329,625	112,881,329	5,643,811	86,918,623	1,375	1,059
Residential	4	Residential Appliance Recycling	RARC	2025	0	2,314	649,687	113,531,016	500,259	87,418,883	364	280
Residential	8	Residential Customer Engagement	RCEB	2021	286,456	302,983	45,901,546	45,901,546	3,672,124	3,672,124	15,753	1,260
Residential	8	Residential Customer Engagement	RCEB	2022	263,463	285,071	55,912,649	101,814,195	8,383,821	12,055,945	26,342	3,124
Residential	8	Residential Customer Engagement	RCEB	2023	307,895	307,901	10,150,065	113,651,882	1,725,511	14,068,352	18,383	3,125
Residential	2	Residential Duct Sealing	RDUC	2012	8	8	1,995	1,995	782	782	5	2
Residential	2	Residential Duct Sealing	RDUC	2013	108	116	68,775	70,770	26,960	27,742	57	22
Residential	2	Residential Duct Sealing	RDUC	2014	401	517	196,047	266,817	76,850	104,592	154	61
Residential	2	Residential Duct Sealing	RDUC	2015	2,183	2,700	968,649	1,235,466	379,710	484,303	694	272
Residential	2	Residential Duct Sealing	RDUC	2016	875	3,575	1,872,784	3,108,249	734,131	1,218,434	971	381
Residential	2	Residential Duct Sealing	RDUC	2017	278	3,853	2,262,047	5,370,297	886,723	2,105,156	1,127	442
Residential	2	Residential Duct Sealing	RDUC	2018	0	3,853	2,273,273	7,643,570	891,123	2,996,279	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2019	0	3,853	2,273,290	9,916,859	891,130	3,887,409	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2020	0	3,853	2,273,290	12,190,149	891,130	4,778,538	1,149	390
Residential	2	Residential Duct Sealing	RDUC	2021	0	3,853	2,273,306	14,463,455	891,136	5,669,674	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2022	0	3,853	2,273,290	16,736,745	891,130	6,560,804	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2023	0	3,853	2,273,290	19,010,034	891,130	7,451,933	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2024	0	3,853	2,273,273	21,283,307	891,123	8,343,056	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2025	0	3,853	2,273,290	23,556,597	891,130	9,234,186	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2026	0	3,853	2,273,290	25,829,886	891,130	10,125,315	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2027	0	3,853	2,273,306	28,103,192	891,136	11,016,451	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2028	0	3,853	2,273,290	30,376,482	891,130	11,907,581	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2029	0	3,853	2,273,273	32,649,755	891,123	12,798,704	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2030	0	3,853	2,271,334	34,921,088	890,363	13,689,067	1,149	450
Residential	2	Residential Duct Sealing	RDUC	2031	0	3,845	2,204,803	37,125,891	864,283	14,553,349	1,142	448
Residential	2	Residential Duct Sealing	RDUC	2032	0	3,722	2,077,636	39,203,527	814,433	15,367,782	1,065	418
Residential	2	Residential Duct Sealing	RDUC	2033	0	3,229	1,307,941	40,511,467	512,713	15,880,495	895	351
Residential	2	Residential Duct Sealing	RDUC	2034	0	1,099	401,994	40,913,462	157,582	16,038,077	209	82
Residential	2	Residential Duct Sealing	RDUC	2035	0	169	11,485	40,924,947	4,502	16,042,579	23	9
Residential	7	Residential Efficient Products Marketplace	REEC	2019	2,785,850	2,785,850	15,316,907	15,316,907	10,721,834	10,721,834	17,384	12,169
Residential	7	Residential Efficient Products Marketplace	REEC	2020	2,683,459	5,469,309	127,306,055	142,622,962	87,790,915	98,512,749	37,540	26,059
Residential	7	Residential Efficient Products Marketplace	REEC	2021	4,380,523	9,849,832	234,663,310	377,286,272	148,547,210	247,059,959	67,145	41,221
Residential	7	Residential Efficient Products Marketplace	REEC	2022	5,247,686	15,097,518	375,526,655	752,812,927	218,759,091	465,819,050	104,506	60,527
Residential	7	Residential Efficient Products Marketplace	REEC	2023	0	15,097,518	452,733,210	1,205,546,136	257,536,276	723,355,327	104,616	60,568
Residential	7	Residential Efficient Products Marketplace	REEC	2024	0	15,097,518	452,733,290	1,658,279,427	257,535,983	980,891,310	104,638	60,581
Residential	7	Residential Efficient Products Marketplace	REEC	2025	0	15,097,518	452,733,211	2,111,012,638	257,536,276	1,238,427,586	104,632	60,577
Residential	7	Residential Efficient Products Marketplace	REEC	2026	0	15,097,518	452,733,202	2,563,745,840	257,536,271	1,495,963,856	104,529	60,541
Residential	7	Residential Efficient Products Marketplace	REEC	2027	0	15,097,518	452,733,124	3,016,478,963	257,536,564	1,753,500,420	104,608	60,564
Residential	7	Residential Efficient Products Marketplace	REEC	2028	0	15,097,518	452,733,225	3,469,212,189	257,536,284	2,011,036,704	104,605	60,563
Residential	7	Residential Efficient Products Marketplace	REEC	2029	0	15,097,518	452,733,289	3,921,945,478	257,535,983	2,268,572,687	104,633	60,579
Residential	7	Residential Efficient Products Marketplace	REEC	2030	0	15,097,518	452,733,204	4,374,678,682	257,536,272	2,526,108,960	104,634	60,579
Residential	7	Residential Efficient Products Marketplace	REEC	2031	0	15,097,518	452,733,204	4,827,411,886	257,536,272	2,783,645,231	104,632	60,577
Residential	7	Residential Efficient Products Marketplace	REEC	2032	0	15,097,518	452,733,107	5,280,144,993	257,536,556	3,041,181,787	104,620	60,571
Residential	7	Residential Efficient Products Marketplace	REEC	2033	0	15,097,518	452,733,230	5,732,878,223	257,536,285	3,298,718,072	104,607	60,563
Residential	7	Residential Efficient Products Marketplace	REEC	2034	0	15,097,518	452,733,208	6,185,611,431	257,536,275	3,556,254,347	104,616	60,568
Residential	7	Residential Efficient Products Marketplace	REEC	2035	0	15,097,518	452,733,293	6,638,344,724	257,535,984	3,813,790,332	104,633	60,579
Residential	7	Residential Efficient Products Marketplace	REEC	2036	0	15,097,518	397,225,600	7,035,570,324	218,910,352	4,032,700,684	98,241	56,823
Residential	7	Residential Efficient Products Marketplace	REEC	2037	0	10,945,453	284,864,210	7,320,434,534	144,719,547	4,177,420,230	73,968	39,828
Residential	7	Residential Efficient Products Marketplace	REEC	2038	0	7,536,741	163,259,731	7,483,694,265	81,825,041	4,259,245,272	51,853	26,691
Residential	7	Residential Efficient Products Marketplace	REEC	2039	0	2,640,561	27,694,593	7,511,388,858	13,909,789	4,273,155,061	20,551	10,621
Residential	8	Residential Electric Vehicle Rewards	REVDR	2021	0	0	0	0	0	0	0	0
Residential	8	Residential Electric Vehicle Rewards	REVDR	2022	0	0	0	0	0	0	0	0
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2021	93	93	2,372	2,372	1,898	1,898	5	4



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincident Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincident Gross Peak Demand (kW) at Year-End	Non-coincident Net Peak Demand Reduction at Year-End (kW)
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2022	206	299	23,770	26,142	19,016	20,914	15	12
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2023	0	299	39,633	65,776	31,707	52,621	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2024	0	299	39,640	105,416	31,712	84,333	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2025	0	299	39,633	145,049	31,707	116,040	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2026	0	299	39,633	184,683	31,707	147,746	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2027	0	299	39,626	224,309	31,701	179,448	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2028	0	299	39,633	263,943	31,707	211,154	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2029	0	299	39,640	303,583	31,712	242,867	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2030	0	299	39,633	343,217	31,707	274,573	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2031	0	299	37,297	380,514	29,838	304,411	19	15
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2032	0	184	15,944	396,457	12,755	317,166	12	9
Residential	2	Residential Heat Pump Upgrade	RHEH	2012	86	86	25,845	25,845	23,440	23,440	55	50
Residential	2	Residential Heat Pump Upgrade	RHEH	2013	3,295	3,381	2,652,155	2,678,000	2,405,372	2,428,812	2,606	2,364
Residential	2	Residential Heat Pump Upgrade	RHEH	2014	3,648	7,029	9,580,657	12,258,657	8,689,176	11,117,989	5,157	4,677
Residential	2	Residential Heat Pump Upgrade	RHEH	2015	4,210	11,239	13,822,735	26,081,392	11,816,793	22,934,782	6,656	6,033
Residential	2	Residential Heat Pump Upgrade	RHEH	2016	5,396	16,635	16,414,415	42,495,807	12,726,196	35,660,978	7,037	6,142
Residential	2	Residential Heat Pump Upgrade	RHEH	2017	1,149	17,784	18,485,973	60,981,779	13,453,589	49,114,567	7,875	6,438
Residential	2	Residential Heat Pump Upgrade	RHEH	2018	0	17,784	18,563,031	79,544,811	13,480,913	62,595,480	8,092	6,538
Residential	2	Residential Heat Pump Upgrade	RHEH	2019	0	17,784	18,562,578	98,107,388	13,480,476	76,075,956	8,094	6,540
Residential	2	Residential Heat Pump Upgrade	RHEH	2020	0	17,784	18,562,584	116,669,972	13,480,482	89,556,438	8,091	6,512
Residential	2	Residential Heat Pump Upgrade	RHEH	2021	0	17,784	18,562,128	135,232,100	13,480,043	103,036,481	8,092	6,575
Residential	2	Residential Heat Pump Upgrade	RHEH	2022	0	17,784	18,562,580	153,794,680	13,480,478	116,516,959	8,092	6,575
Residential	2	Residential Heat Pump Upgrade	RHEH	2023	0	17,784	18,562,580	172,357,260	13,480,479	129,997,438	8,092	6,513
Residential	2	Residential Heat Pump Upgrade	RHEH	2024	0	17,784	18,563,030	190,920,290	13,480,912	143,478,349	8,093	6,539
Residential	2	Residential Heat Pump Upgrade	RHEH	2025	0	17,784	18,562,580	209,482,870	13,480,478	156,958,828	8,093	6,575
Residential	2	Residential Heat Pump Upgrade	RHEH	2026	0	17,784	18,562,581	228,045,451	13,480,479	170,439,307	8,092	6,513
Residential	2	Residential Heat Pump Upgrade	RHEH	2027	0	17,784	18,536,702	246,582,154	13,456,983	183,896,290	8,092	6,575
Residential	2	Residential Heat Pump Upgrade	RHEH	2028	0	17,664	15,920,271	262,502,425	11,084,036	194,980,326	7,989	6,419
Residential	2	Residential Heat Pump Upgrade	RHEH	2029	0	14,119	8,993,560	271,495,985	4,801,881	199,782,207	4,478	3,227
Residential	2	Residential Heat Pump Upgrade	RHEH	2030	0	10,454	4,747,491	276,243,475	1,666,369	201,448,577	1,684	591
Residential	2	Residential Heat Pump Upgrade	RHEH	2031	0	6,124	2,157,572	278,401,048	757,308	202,205,884	1,058	371
Residential	2	Residential Heat Pump Upgrade	RHEH	2032	0	321	78,314	278,479,361	27,488	202,233,373	229	80
Residential	8	Residential Home Retrofit	RHRF	2021	99	99	40,696	40,696	36,627	36,627	46	42
Residential	8	Residential Home Retrofit	RHRF	2022	50	149	262,927	303,624	236,635	273,261	98	88
Residential	8	Residential Home Retrofit	RHRF	2023	0	149	335,237	638,861	301,713	574,975	130	117
Residential	8	Residential Home Retrofit	RHRF	2024	0	149	335,234	974,095	301,710	876,685	130	117
Residential	8	Residential Home Retrofit	RHRF	2025	0	149	335,237	1,309,332	301,714	1,178,399	130	117
Residential	8	Residential Home Retrofit	RHRF	2026	0	149	335,237	1,644,569	301,714	1,480,112	130	117
Residential	8	Residential Home Retrofit	RHRF	2027	0	149	333,834	1,978,403	300,450	1,780,563	130	117
Residential	8	Residential Home Retrofit	RHRF	2028	0	149	332,579	2,310,982	299,321	2,079,883	130	117
Residential	8	Residential Home Retrofit	RHRF	2029	0	149	332,430	2,643,412	299,187	2,379,070	130	117
Residential	8	Residential Home Retrofit	RHRF	2030	0	149	331,889	2,975,301	298,700	2,677,771	130	117
Residential	8	Residential Home Retrofit	RHRF	2031	0	149	331,744	3,307,044	298,569	2,976,340	130	117
Residential	8	Residential Home Retrofit	RHRF	2032	0	149	330,961	3,638,006	297,865	3,274,205	130	117
Residential	8	Residential Home Retrofit	RHRF	2033	0	148	330,383	3,968,388	297,344	3,571,549	130	117
Residential	8	Residential Home Retrofit	RHRF	2034	0	148	330,383	4,298,771	297,344	3,868,894	130	117
Residential	8	Residential Home Retrofit	RHRF	2035	0	148	330,379	4,629,150	297,341	4,166,235	130	117
Residential	8	Residential Home Retrofit	RHRF	2036	0	148	328,785	4,957,934	295,906	4,462,141	130	117
Residential	8	Residential Home Retrofit	RHRF	2037	0	147	312,953	5,270,888	281,658	4,743,799	127	114
Residential	8	Residential Home Retrofit	RHRF	2038	0	145	299,067	5,569,954	269,160	5,012,959	112	97
Residential	8	Residential Home Retrofit	RHRF	2039	0	144	297,587	5,867,542	267,829	5,280,788	112	101
Residential	8	Residential Home Retrofit	RHRF	2040	0	144	296,361	6,163,902	266,724	5,547,512	112	101
Residential	8	Residential Home Retrofit	RHRF	2041	0	144	289,943	6,453,845	260,949	5,808,461	112	101
Residential	8	Residential Home Retrofit	RHRF	2042	0	134	256,933	6,710,778	231,240	6,039,700	102	92
Residential	8	Residential Home Retrofit	RHRF	2043	0	134	246,652	6,957,430	221,987	6,261,687	96	86
Residential	8	Residential Home Retrofit	RHRF	2044	0	134	246,601	7,204,031	221,941	6,483,628	96	86
Residential	8	Residential HVAC Health and Safety	RHVC	2021	3,361	3,350	282,644	282,644	226,115	226,115	575	460
Residential	8	Residential HVAC Health and Safety	RHVC	2022	3,661	7,004	1,790,415	2,073,059	1,432,332	1,658,447	968	774
Residential	8	Residential HVAC Health and Safety	RHVC	2023	0	7,004	2,340,539	4,413,598	1,872,431	3,530,878	1,425	1,140
Residential	8	Residential HVAC Health and Safety	RHVC	2024	0	7,004	2,340,470	6,754,068	1,872,376	5,403,255	1,424	1,139
Residential	8	Residential HVAC Health and Safety	RHVC	2025	0	7,004	2,340,540	9,094,608	1,872,432	7,275,687	1,424	1,139
Residential	8	Residential HVAC Health and Safety	RHVC	2026	0	7,004	2,340,540	11,435,148	1,872,432	9,148,118	1,425	1,140
Residential	8	Residential HVAC Health and Safety	RHVC	2027	0	7,004	2,339,238	13,774,386	1,871,390	11,019,509	1,425	1,140
Residential	8	Residential HVAC Health and Safety	RHVC	2028	0	7,000	2,306,787	16,081,173	1,845,430	12,864,939	1,418	1,134
Residential	8	Residential HVAC Health and Safety	RHVC	2029	0	6,671	1,869,337	17,950,511	1,495,470	14,360,408	1,338	1,070
Residential	8	Residential HVAC Health and Safety	RHVC	2030	0	4,040	1,218,790	19,169,300	975,032	15,335,440	536	429
Residential	8	Residential HVAC Health and Safety	RHVC	2031	0	2,753	1,142,923	20,312,223	914,338	16,249,779	396	317
Residential	8	Residential HVAC Health and Safety	RHVC	2032	0	2,753	1,142,924	21,455,148	914,339	17,164,118	396	317
Residential	8	Residential HVAC Health and Safety	RHVC	2033	0	2,753	1,142,923	22,598,071	914,338	18,078,457	396	317



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Heat Pump Upgrade	RHEH	2012	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Heat Pump Upgrade	RHEH	2013	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	2	Residential Heat Pump Upgrade	RHEH	2014	44	44	13,816	13,816	12,530	12,530	23	20
Residential	2	Residential Heat Pump Upgrade	RHEH	2015	597	641	237,500	251,316	123,641	136,171	154	64
Residential	2	Residential Heat Pump Upgrade	RHEH	2016	665	1,306	508,773	760,089	218,858	355,029	269	104
Residential	2	Residential Heat Pump Upgrade	RHEH	2017	118	1,424	725,515	1,485,604	294,934	649,963	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2018	0	1,424	735,284	2,220,888	298,362	948,324	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2019	0	1,424	735,286	2,956,174	298,363	1,246,688	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2020	0	1,424	735,286	3,691,460	298,363	1,545,051	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2021	0	1,424	735,288	4,426,748	298,365	1,843,416	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2022	0	1,424	735,286	5,162,034	298,363	2,141,780	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2023	0	1,424	735,286	5,897,320	298,363	2,440,143	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2024	0	1,424	735,284	6,632,604	298,362	2,738,505	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2025	0	1,424	735,286	7,367,890	298,363	3,036,868	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2026	0	1,424	735,286	8,103,176	298,363	3,335,231	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2027	0	1,424	735,288	8,838,464	298,365	3,633,596	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2028	0	1,424	735,286	9,573,750	298,363	3,931,960	321	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2029	0	1,424	721,572	10,295,322	285,925	4,217,885	320	122
Residential	2	Residential Heat Pump Upgrade	RHEH	2030	0	1,346	498,634	10,793,956	175,020	4,392,906	168	59
Residential	2	Residential Heat Pump Upgrade	RHEH	2031	0	760	227,390	11,021,346	79,814	4,472,719	114	40
Residential	2	Residential Heat Pump Upgrade	RHEH	2032	0	42	10,017	11,031,362	3,516	4,476,235	27	9
Residential	8	Residential Home Retrofit	RHRF	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2040	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2041	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2042	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2043	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Home Retrofit	RHRF	2044	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2022	206	299	23,770	26,142	19,016	20,914	15	12
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2023	0	299	39,633	65,776	31,707	52,621	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2024	0	299	39,640	105,416	31,712	84,333	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2025	0	299	39,633	145,049	31,707	116,040	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2026	0	299	39,633	184,683	31,707	147,746	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2027	0	299	39,626	224,309	31,701	179,448	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2028	0	299	39,633	263,943	31,707	211,154	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2029	0	299	39,640	303,583	31,712	242,867	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2030	0	299	39,633	343,217	31,707	274,573	19	16
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2031	0	299	37,297	380,514	29,838	304,411	19	15
Residential	8	Residential Electric Vehicle Energy Efficiency and Demand Response	REVEE	2032	0	184	15,944	396,457	12,755	317,166	12	9
Residential	2	Residential Heat Pump Upgrade	RHEH	2012	86	86	25,845	25,845	23,440	23,440	55	50
Residential	2	Residential Heat Pump Upgrade	RHEH	2013	3,295	3,381	2,652,155	2,678,000	2,405,372	2,428,812	2,606	2,364
Residential	2	Residential Heat Pump Upgrade	RHEH	2014	3,692	7,073	9,594,472	12,272,472	8,701,707	11,130,519	5,180	4,698
Residential	2	Residential Heat Pump Upgrade	RHEH	2015	4,807	11,880	14,060,235	26,332,707	11,940,434	23,070,952	6,810	6,097
Residential	2	Residential Heat Pump Upgrade	RHEH	2016	6,061	17,941	16,923,188	43,255,896	12,945,055	36,016,007	7,306	6,246
Residential	2	Residential Heat Pump Upgrade	RHEH	2017	1,267	19,208	19,211,488	62,467,383	13,748,523	49,764,530	8,196	6,561
Residential	2	Residential Heat Pump Upgrade	RHEH	2018	0	19,208	19,298,315	81,765,698	13,779,274	63,543,804	8,414	6,661
Residential	2	Residential Heat Pump Upgrade	RHEH	2019	0	19,208	19,297,864	101,063,562	13,778,840	77,322,644	8,415	6,662
Residential	2	Residential Heat Pump Upgrade	RHEH	2020	0	19,208	19,297,870	120,361,432	13,778,845	91,101,489	8,413	6,634
Residential	2	Residential Heat Pump Upgrade	RHEH	2021	0	19,208	19,297,416	139,658,848	13,778,408	104,879,897	8,414	6,697
Residential	2	Residential Heat Pump Upgrade	RHEH	2022	0	19,208	19,297,866	158,956,714	13,778,842	118,658,739	8,414	6,697
Residential	2	Residential Heat Pump Upgrade	RHEH	2023	0	19,208	19,297,866	178,254,580	13,778,842	132,437,580	8,414	6,635
Residential	2	Residential Heat Pump Upgrade	RHEH	2024	0	19,208	19,298,314	197,552,894	13,779,273	146,216,854	8,415	6,662
Residential	2	Residential Heat Pump Upgrade	RHEH	2025	0	19,208	19,297,866	216,850,760	13,778,842	159,995,695	8,414	6,698
Residential	2	Residential Heat Pump Upgrade	RHEH	2026	0	19,208	19,297,867	236,148,627	13,778,843	173,774,538	8,414	6,635
Residential	2	Residential Heat Pump Upgrade	RHEH	2027	0	19,208	19,271,991	255,420,618	13,755,348	187,529,886	8,414	6,697
Residential	2	Residential Heat Pump Upgrade	RHEH	2028	0	19,088	16,655,557	272,076,175	11,382,400	198,912,286	8,310	6,541
Residential	2	Residential Heat Pump Upgrade	RHEH	2029	0	15,543	19,543	281,791,307	5,087,806	204,000,093	4,799	3,348
Residential	2	Residential Heat Pump Upgrade	RHEH	2030	0	11,800	5,246,124	287,037,431	1,841,390	205,841,482	1,852	650
Residential	2	Residential Heat Pump Upgrade	RHEH	2031	0	6,884	2,384,962	289,422,393	837,122	206,678,604	1,172	411
Residential	2	Residential Heat Pump Upgrade	RHEH	2032	0	363	88,330	289,510,724	31,004	206,709,608	256	90
Residential	8	Residential Home Retrofit	RHRF	2021	99	99	40,696	40,696	36,627	36,627	46	42
Residential	8	Residential Home Retrofit	RHRF	2022	50	149	262,927	303,624	236,635	273,261	98	88
Residential	8	Residential Home Retrofit	RHRF	2023	0	149	335,237	638,861	301,713	574,975	130	117
Residential	8	Residential Home Retrofit	RHRF	2024	0	149	335,234	974,095	301,710	876,685	130	117
Residential	8	Residential Home Retrofit	RHRF	2025	0	149	335,237	1,309,332	301,714	1,178,399	130	117
Residential	8	Residential Home Retrofit	RHRF	2026	0	149	335,237	1,644,569	301,714	1,480,112	130	117
Residential	8	Residential Home Retrofit	RHRF	2027	0	149	333,834	1,978,403	300,450	1,780,563	130	117
Residential	8	Residential Home Retrofit	RHRF	2028	0	149	332,579	2,310,982	299,321	2,079,883	130	117
Residential	8	Residential Home Retrofit	RHRF	2029	0	149	332,430	2,643,412	299,187	2,379,070	130	117
Residential	8	Residential Home Retrofit	RHRF	2030	0	149	331,889	2,975,301	298,700	2,677,771	130	117
Residential	8	Residential Home Retrofit	RHRF	2031	0	149	331,744	3,307,044	298,569	2,976,340	130	117
Residential	8	Residential Home Retrofit	RHRF	2032	0	149	330,961	3,638,006	297,865	3,274,205	130	117
Residential	8	Residential Home Retrofit	RHRF	2033	0	148	330,383	3,968,388	297,344	3,571,549	130	117
Residential	8	Residential Home Retrofit	RHRF	2034	0	148	330,383	4,298,771	297,344	3,868,894	130	117
Residential	8	Residential Home Retrofit	RHRF	2035	0	148	330,379	4,629,150	297,341	4,166,235	130	117
Residential	8	Residential Home Retrofit	RHRF	2036	0	148	328,785	4,957,934	295,906	4,462,141	130	117
Residential	8	Residential Home Retrofit	RHRF	2037	0	147	312,953	5,270,888	281,658	4,743,799	127	114
Residential	8	Residential Home Retrofit	RHRF	2038	0	145	299,067	5,569,954	269,160	5,012,959	112	97
Residential	8	Residential Home Retrofit	RHRF	2039	0	144	297,587	5,867,542	267,829	5,280,788	112	101
Residential	8	Residential Home Retrofit	RHRF	2040	0	144	296,361	6,163,902	266,724	5,547,512	112	101
Residential	8	Residential Home Retrofit	RHRF	2041	0	144	289,943	6,453,845	260,949	5,808,461	112	101
Residential	8	Residential Home Retrofit	RHRF	2042	0	134	256,933	6,710,778	231,240	6,039,700	102	92
Residential	8	Residential Home Retrofit	RHRF	2043	0	134	246,652	6,957,430	221,987	6,261,687	96	86
Residential	8	Residential Home Retrofit	RHRF	2044	0	134	246,601	7,204,031	221,941	6,483,628	96	86
Residential	8	Residential HVAC Health and Safety	RHVC	2021	3,361	3,350	282,644	282,644	226,115	226,115	575	460
Residential	8	Residential HVAC Health and Safety	RHVC	2022	3,661	7,004	1,790,415	2,073,059	1,432,332	1,658,447	968	774
Residential	8	Residential HVAC Health and Safety	RHVC	2023	0	7,004	2,340,539	4,413,598	1,872,431	3,530,878	1,425	1,140
Residential	8	Residential HVAC Health and Safety	RHVC	2024	0	7,004	2,340,470	6,754,068	1,872,376	5,403,255	1,424	1,139
Residential	8	Residential HVAC Health and Safety	RHVC	2025	0	7,004	2,340,540	9,094,608	1,872,432	7,275,687	1,424	1,139
Residential	8	Residential HVAC Health and Safety	RHVC	2026	0	7,004	2,340,540	11,435,148	1,872,432	9,148,118	1,425	1,140
Residential	8	Residential HVAC Health and Safety	RHVC	2027	0	7,004	2,339,238	13,774,386	1,871,390	11,019,509	1,425	1,140
Residential	8	Residential HVAC Health and Safety	RHVC	2028	0	7,000	2,306,787	16,081,173	1,845,430	12,864,939	1,418	1,134
Residential	8	Residential HVAC Health and Safety	RHVC	2029	0	6,671	1,869,337	17,950,511	1,495,470	14,360,408	1,338	1,070
Residential	8	Residential HVAC Health and Safety	RHVC	2030	0	4,040	1,218,790	19,169,300	975,032	15,335,440	536	429
Residential	8	Residential HVAC Health and Safety	RHVC	2031	0	2,753	1,142,923	20,312,223	914,338	16,249,779	396	317
Residential	8	Residential HVAC Health and Safety	RHVC	2032	0	2,753	1,142,924	21,455,148	914,339	17,164,118	396	317
Residential	8	Residential HVAC Health and Safety	RHVC	2033	0	2,753	1,142,923	22,598,071	914,338	18,078,457	396	317



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	8	Residential HVAC Health and Safety	RHVC	2034	0	2,753	1,142,923	23,740,994	914,338	18,992,795	396	317
Residential	8	Residential HVAC Health and Safety	RHVC	2035	0	2,753	1,142,922	24,883,916	914,337	19,907,132	396	317
Residential	8	Residential HVAC Health and Safety	RHVC	2036	0	2,753	1,135,520	26,019,436	908,416	20,815,548	395	316
Residential	8	Residential HVAC Health and Safety	RHVC	2037	0	2,716	1,106,697	27,126,133	885,358	21,700,906	392	314
Residential	8	Residential HVAC Health and Safety	RHVC	2038	0	2,697	1,093,200	28,219,333	874,560	22,575,466	392	313
Residential	8	Residential HVAC Health and Safety	RHVC	2039	0	2,697	1,052,387	29,271,720	841,910	23,417,376	391	313
Residential	8	Residential HVAC Health and Safety	RHVC	2040	0	2,097	681,306	29,953,027	545,045	23,962,421	250	200
Residential	8	Residential HVAC Health and Safety	RHVC	2041	0	979	436,785	30,389,811	349,428	24,311,849	166	133
Residential	8	Residential HVAC Health and Safety	RHVC	2042	0	626	167,928	30,557,740	134,343	24,446,192	90	72
Residential	8	Residential HVAC Health and Safety	RHVC	2043	0	585	106,561	30,664,301	85,249	24,531,441	45	36
Residential	8	Residential HVAC Health and Safety	RHVC	2044	0	585	106,545	30,770,846	85,236	24,616,677	45	36
Residential	8	Residential HVAC Health and Safety	RHVC	2045	0	585	9,559	30,780,405	7,647	24,624,324	2,121	1,697
Residential	8	Residential Kits	RKTS	2021	28,113	28,113	956,955	956,955	574,173	574,173	906	544
Residential	8	Residential Kits	RKTS	2022	26,790	54,903	4,923,259	5,880,214	2,953,956	3,528,129	1,788	1,073
Residential	8	Residential Kits	RKTS	2023	0	54,903	6,881,559	12,761,773	4,128,935	7,657,064	1,788	1,073
Residential	8	Residential Kits	RKTS	2024	0	54,903	6,881,725	19,643,498	4,129,035	11,786,099	1,795	1,077
Residential	8	Residential Kits	RKTS	2025	0	54,903	6,881,560	26,525,058	4,128,936	15,915,035	1,786	1,071
Residential	8	Residential Kits	RKTS	2026	0	54,903	5,995,232	32,520,290	3,597,139	19,512,174	1,740	1,044
Residential	8	Residential Kits	RKTS	2027	0	27,639	2,464,131	34,984,422	1,478,479	20,990,653	886	531
Residential	8	Residential Kits	RKTS	2028	0	1,357	690,322	35,674,744	414,193	21,404,846	171	103
Residential	8	Residential Kits	RKTS	2029	0	1,357	690,316	36,365,060	414,190	21,819,036	173	104
Residential	8	Residential Kits	RKTS	2030	0	1,357	690,322	37,055,383	414,193	22,233,230	173	104
Residential	8	Residential Kits	RKTS	2031	0	1,357	672,067	37,727,450	403,240	22,636,470	173	104
Residential	8	Residential Kits	RKTS	2032	0	1,357	518,999	38,246,449	311,399	22,947,869	141	84
Residential	8	Residential Kits	RKTS	2033	0	1,357	440,377	38,686,826	264,226	23,212,096	104	62
Residential	8	Residential Kits	RKTS	2034	0	1,357	440,377	39,127,203	264,226	23,476,322	104	62
Residential	8	Residential Kits	RKTS	2035	0	1,357	440,374	39,567,577	264,224	23,740,546	104	62
Residential	8	Residential Kits	RKTS	2036	0	1,357	423,472	39,991,049	254,083	23,994,629	104	62
Residential	8	Residential Kits	RKTS	2037	0	1,123	314,891	40,305,940	188,935	24,183,564	87	52
Residential	8	Residential Kits	RKTS	2038	0	845	271,110	40,577,050	162,666	24,346,230	75	45
Residential	8	Residential Kits	RKTS	2039	0	845	271,108	40,848,158	162,665	24,508,895	75	45
Residential	8	Residential Kits	RKTS	2040	0	845	271,107	41,119,265	162,664	24,671,559	75	45
Residential	8	Residential Kits	RKTS	2041	0	845	223,276	41,342,541	133,966	24,805,525	72	43
Residential	8	Residential Kits	RKTS	2042	0	349	48,352	41,390,893	29,011	24,834,536	36	22
Residential	5	Residential Retail LED	RLED	2017	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2018	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2019	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2020	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	5	Residential Retail LED	RLED	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	1	Residential Lighting	RLGT	2010	2,016,479	2,016,479	32,971,469	32,971,469	18,002,422	18,002,422	23,055	12,588
Residential	1	Residential Lighting	RLGT	2011	2,206,030	4,222,509	176,475,708	209,447,177	96,355,736	114,358,158	49,533	27,045
Residential	1	Residential Lighting	RLGT	2012	0	4,222,509	218,329,758	427,776,935	119,208,048	233,566,207	49,539	27,048
Residential	1	Residential Lighting	RLGT	2013	0	4,222,509	218,332,849	646,109,784	119,209,736	352,775,942	49,543	27,050
Residential	1	Residential Lighting	RLGT	2014	0	4,222,509	218,332,871	864,442,656	119,209,748	471,985,690	49,543	27,050
Residential	1	Residential Lighting	RLGT	2015	0	4,222,509	218,332,872	1,082,775,528	119,209,748	591,195,438	49,541	27,049



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	8	Residential HVAC Health and Safety	RHVC	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2040	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2041	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2042	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2043	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2044	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential HVAC Health and Safety	RHVC	2045	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Kits	RKTS	2021	1,264	1,264	47,450	47,450	28,470	28,470	42	25
Residential	8	Residential Kits	RKTS	2022	1,453	2,717	236,439	283,889	141,863	170,333	89	54
Residential	8	Residential Kits	RKTS	2023	0	2,717	341,936	625,825	205,162	375,495	89	54
Residential	8	Residential Kits	RKTS	2024	0	2,717	341,944	967,769	205,166	580,661	90	54
Residential	8	Residential Kits	RKTS	2025	0	2,717	341,936	1,309,705	205,162	785,823	89	54
Residential	8	Residential Kits	RKTS	2026	0	2,717	299,236	1,608,941	179,541	965,364	87	52
Residential	8	Residential Kits	RKTS	2027	0	1,500	131,982	1,740,923	79,189	1,044,554	49	29
Residential	8	Residential Kits	RKTS	2028	0	67	35,250	1,776,173	21,150	1,065,704	8	5
Residential	8	Residential Kits	RKTS	2029	0	67	35,249	1,811,422	21,149	1,086,853	8	5
Residential	8	Residential Kits	RKTS	2030	0	67	35,250	1,846,672	21,150	1,108,003	8	5
Residential	8	Residential Kits	RKTS	2031	0	67	33,813	1,880,484	20,288	1,128,291	8	5
Residential	8	Residential Kits	RKTS	2032	0	67	25,641	1,906,126	15,385	1,143,675	6	4
Residential	8	Residential Kits	RKTS	2033	0	67	22,387	1,928,513	13,432	1,157,108	5	3
Residential	8	Residential Kits	RKTS	2034	0	67	22,387	1,950,900	13,432	1,170,540	5	3
Residential	8	Residential Kits	RKTS	2035	0	67	1,973,286	1,973,286	13,432	1,183,972	5	3
Residential	8	Residential Kits	RKTS	2036	0	67	21,231	1,994,517	12,738	1,196,710	5	3
Residential	8	Residential Kits	RKTS	2037	0	58	15,712	2,010,228	9,427	1,206,137	4	3
Residential	8	Residential Kits	RKTS	2038	0	43	13,431	2,023,659	8,058	1,214,195	4	2
Residential	8	Residential Kits	RKTS	2039	0	43	13,431	2,037,090	8,058	1,222,254	4	2
Residential	8	Residential Kits	RKTS	2040	0	43	13,430	2,050,520	8,058	1,230,312	4	2
Residential	8	Residential Kits	RKTS	2041	0	43	10,683	2,061,203	6,410	1,236,722	4	2
Residential	8	Residential Kits	RKTS	2042	0	21	2,589	2,063,792	1,553	1,238,275	2	1
Residential	5	Residential Retail LED	RLED	2017	70,261	70,261	344,010	344,010	292,409	292,409	491	417
Residential	5	Residential Retail LED	RLED	2018	264,236	334,497	4,606,429	4,950,440	3,915,465	4,207,874	1,828	1,554
Residential	5	Residential Retail LED	RLED	2019	0	334,497	8,133,309	13,083,749	6,913,313	11,121,187	1,828	1,554
Residential	5	Residential Retail LED	RLED	2020	0	334,497	8,133,309	21,217,058	6,913,313	18,034,499	1,828	1,554
Residential	5	Residential Retail LED	RLED	2021	0	334,497	8,133,351	29,350,410	6,913,349	24,947,848	1,828	1,554
Residential	5	Residential Retail LED	RLED	2022	0	334,497	8,133,309	37,483,719	6,913,313	31,861,161	1,828	1,554
Residential	5	Residential Retail LED	RLED	2023	0	334,497	8,133,309	45,617,028	6,913,313	38,774,474	1,828	1,554
Residential	5	Residential Retail LED	RLED	2024	0	334,497	8,133,267	53,750,295	6,913,277	45,687,751	1,828	1,554
Residential	5	Residential Retail LED	RLED	2025	0	334,497	8,133,309	61,883,604	6,913,313	52,601,064	1,828	1,554
Residential	5	Residential Retail LED	RLED	2026	0	334,497	8,133,309	70,016,914	6,913,313	59,514,377	1,828	1,554
Residential	5	Residential Retail LED	RLED	2027	0	334,497	8,133,351	78,150,265	6,913,349	66,427,725	1,828	1,554
Residential	5	Residential Retail LED	RLED	2028	0	334,497	8,133,309	86,283,575	6,913,313	73,341,038	1,828	1,554
Residential	5	Residential Retail LED	RLED	2029	0	334,497	8,133,267	94,416,842	6,913,277	80,254,315	1,828	1,554
Residential	5	Residential Retail LED	RLED	2030	0	334,497	8,133,309	102,550,151	6,913,313	87,167,628	1,828	1,554
Residential	5	Residential Retail LED	RLED	2031	0	334,497	8,133,309	110,683,460	6,913,313	94,080,941	1,828	1,554
Residential	5	Residential Retail LED	RLED	2032	0	334,497	8,133,351	118,816,811	6,913,349	100,994,290	1,828	1,554
Residential	5	Residential Retail LED	RLED	2033	0	334,497	8,133,309	126,950,121	6,913,313	107,907,603	1,828	1,554
Residential	5	Residential Retail LED	RLED	2034	0	334,497	8,133,309	135,083,430	6,913,313	114,820,916	1,828	1,554
Residential	5	Residential Retail LED	RLED	2035	0	334,497	8,133,267	143,216,697	6,913,277	121,734,192	1,828	1,554
Residential	5	Residential Retail LED	RLED	2036	0	334,497	8,133,309	151,350,006	6,913,313	128,647,505	1,828	1,554
Residential	5	Residential Retail LED	RLED	2037	0	334,497	7,795,928	159,145,934	6,626,539	135,274,044	1,706	1,450
Residential	5	Residential Retail LED	RLED	2038	0	251,754	3,543,874	162,689,809	3,012,293	138,286,338	1,230	1,045
Residential	5	Residential Retail LED	RLED	2039	0	0	18	162,689,827	15	138,286,353	5	4
Residential	1	Residential Lighting	RLGT	2010	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	1	Residential Lighting	RLGT	2011	37,120	37,120	524,766	524,766	286,522	286,522	427	233
Residential	1	Residential Lighting	RLGT	2012	0	37,120	1,882,471	2,407,237	1,027,829	1,314,351	427	233
Residential	1	Residential Lighting	RLGT	2013	0	37,120	1,882,498	4,289,735	1,027,844	2,342,195	427	233
Residential	1	Residential Lighting	RLGT	2014	0	37,120	1,882,498	6,172,233	1,027,844	3,370,039	427	233
Residential	1	Residential Lighting	RLGT	2015	0	37,120	1,882,498	8,054,730	1,027,844	4,397,883	427	233



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	8	Residential HVAC Health and Safety	RHVC	2034	0	2,753	1,142,923	23,740,994	914,338	18,992,795	396	317
Residential	8	Residential HVAC Health and Safety	RHVC	2035	0	2,753	1,142,922	24,883,916	914,337	19,907,132	396	317
Residential	8	Residential HVAC Health and Safety	RHVC	2036	0	2,753	1,135,520	26,019,436	908,416	20,815,548	395	316
Residential	8	Residential HVAC Health and Safety	RHVC	2037	0	2,716	1,106,697	27,126,133	885,358	21,700,906	392	314
Residential	8	Residential HVAC Health and Safety	RHVC	2038	0	2,697	1,093,200	28,219,333	874,560	22,575,466	392	313
Residential	8	Residential HVAC Health and Safety	RHVC	2039	0	2,697	1,052,387	29,271,720	841,910	23,417,376	391	313
Residential	8	Residential HVAC Health and Safety	RHVC	2040	0	2,097	681,306	29,953,027	545,045	23,962,421	250	200
Residential	8	Residential HVAC Health and Safety	RHVC	2041	0	979	436,785	30,389,811	349,428	24,311,849	166	133
Residential	8	Residential HVAC Health and Safety	RHVC	2042	0	626	167,928	30,557,740	134,343	24,446,192	90	72
Residential	8	Residential HVAC Health and Safety	RHVC	2043	0	585	106,561	30,664,301	85,249	24,531,441	45	36
Residential	8	Residential HVAC Health and Safety	RHVC	2044	0	585	106,545	30,770,846	85,236	24,616,677	45	36
Residential	8	Residential HVAC Health and Safety	RHVC	2045	0	585	9,559	30,780,405	7,647	24,624,324	2,121	1,697
Residential	8	Residential Kits	RKTS	2021	29,377	29,377	1,004,405	1,004,405	602,643	602,643	947	568
Residential	8	Residential Kits	RKTS	2022	28,243	57,620	5,159,698	6,164,103	3,095,819	3,698,462	1,877	1,126
Residential	8	Residential Kits	RKTS	2023	0	57,620	7,223,495	13,387,598	4,334,097	8,032,559	1,877	1,126
Residential	8	Residential Kits	RKTS	2024	0	57,620	7,223,669	20,611,267	4,334,202	12,366,760	1,884	1,131
Residential	8	Residential Kits	RKTS	2025	0	57,620	7,223,496	27,834,763	4,334,097	16,700,858	1,875	1,125
Residential	8	Residential Kits	RKTS	2026	0	57,620	6,294,468	34,129,231	3,776,681	20,477,539	1,827	1,096
Residential	8	Residential Kits	RKTS	2027	0	29,139	2,596,114	36,725,345	1,557,668	22,035,207	934	561
Residential	8	Residential Kits	RKTS	2028	0	1,424	725,572	37,450,917	435,343	22,470,550	179	107
Residential	8	Residential Kits	RKTS	2029	0	1,424	725,565	38,176,482	435,339	22,905,889	181	109
Residential	8	Residential Kits	RKTS	2030	0	1,424	725,572	38,902,054	435,343	23,341,233	181	109
Residential	8	Residential Kits	RKTS	2031	0	1,424	705,880	39,607,935	423,528	23,764,761	181	109
Residential	8	Residential Kits	RKTS	2032	0	1,424	544,640	40,152,575	326,784	24,091,545	147	88
Residential	8	Residential Kits	RKTS	2033	0	1,424	462,764	40,615,339	277,658	24,369,203	109	65
Residential	8	Residential Kits	RKTS	2034	0	1,424	462,764	41,078,103	277,658	24,646,862	109	65
Residential	8	Residential Kits	RKTS	2035	0	1,424	462,760	41,540,863	277,656	24,924,518	109	65
Residential	8	Residential Kits	RKTS	2036	0	1,424	444,702	41,985,566	266,821	25,191,339	109	65
Residential	8	Residential Kits	RKTS	2037	0	1,181	330,603	42,316,168	198,362	25,389,701	92	55
Residential	8	Residential Kits	RKTS	2038	0	888	284,541	42,600,709	170,724	25,560,425	79	47
Residential	8	Residential Kits	RKTS	2039	0	888	284,539	42,885,248	170,723	25,731,149	79	47
Residential	8	Residential Kits	RKTS	2040	0	888	284,537	43,169,785	170,722	25,901,871	79	47
Residential	8	Residential Kits	RKTS	2041	0	888	233,959	43,403,744	140,376	26,042,246	76	46
Residential	8	Residential Kits	RKTS	2042	0	370	50,941	43,454,685	30,564	26,072,811	38	23
Residential	5	Residential Retail LED	RLED	2017	70,261	70,261	344,010	344,010	292,409	292,409	491	417
Residential	5	Residential Retail LED	RLED	2018	264,236	334,497	4,606,429	4,950,440	3,915,465	4,207,874	1,828	1,554
Residential	5	Residential Retail LED	RLED	2019	0	334,497	8,133,309	13,083,749	6,913,313	11,121,187	1,828	1,554
Residential	5	Residential Retail LED	RLED	2020	0	334,497	8,133,309	21,217,058	6,913,313	18,034,499	1,828	1,554
Residential	5	Residential Retail LED	RLED	2021	0	334,497	8,133,351	29,350,410	6,913,349	24,947,848	1,828	1,554
Residential	5	Residential Retail LED	RLED	2022	0	334,497	8,133,309	37,483,719	6,913,313	31,861,161	1,828	1,554
Residential	5	Residential Retail LED	RLED	2023	0	334,497	8,133,309	45,617,028	6,913,313	38,774,474	1,828	1,554
Residential	5	Residential Retail LED	RLED	2024	0	334,497	8,133,267	53,750,295	6,913,277	45,687,751	1,828	1,554
Residential	5	Residential Retail LED	RLED	2025	0	334,497	8,133,309	61,883,604	6,913,313	52,601,064	1,828	1,554
Residential	5	Residential Retail LED	RLED	2026	0	334,497	8,133,309	70,016,914	6,913,313	59,514,377	1,828	1,554
Residential	5	Residential Retail LED	RLED	2027	0	334,497	8,133,351	78,150,265	6,913,349	66,427,725	1,828	1,554
Residential	5	Residential Retail LED	RLED	2028	0	334,497	8,133,309	86,283,575	6,913,313	73,341,038	1,828	1,554
Residential	5	Residential Retail LED	RLED	2029	0	334,497	8,133,267	94,416,842	6,913,277	80,254,315	1,828	1,554
Residential	5	Residential Retail LED	RLED	2030	0	334,497	8,133,309	102,550,151	6,913,313	87,167,628	1,828	1,554
Residential	5	Residential Retail LED	RLED	2031	0	334,497	8,133,309	110,683,460	6,913,313	94,080,941	1,828	1,554
Residential	5	Residential Retail LED	RLED	2032	0	334,497	8,133,351	118,816,811	6,913,349	100,994,290	1,828	1,554
Residential	5	Residential Retail LED	RLED	2033	0	334,497	8,133,309	126,950,121	6,913,313	107,907,603	1,828	1,554
Residential	5	Residential Retail LED	RLED	2034	0	334,497	8,133,309	135,083,430	6,913,313	114,820,916	1,828	1,554
Residential	5	Residential Retail LED	RLED	2035	0	334,497	8,133,267	143,216,697	6,913,277	121,734,192	1,828	1,554
Residential	5	Residential Retail LED	RLED	2036	0	334,497	8,133,309	151,350,006	6,913,313	128,647,505	1,828	1,554
Residential	5	Residential Retail LED	RLED	2037	0	334,497	7,795,928	159,145,934	6,626,539	135,274,044	1,706	1,450
Residential	5	Residential Retail LED	RLED	2038	0	251,754	3,543,874	162,689,809	3,012,293	138,286,338	1,230	1,045
Residential	5	Residential Retail LED	RLED	2039	0	0	18	162,689,827	15	138,286,353	5	4
Residential	1	Residential Lighting	RLGT	2010	2,016,479	2,016,479	32,971,469	32,971,469	18,002,422	18,002,422	23,055	12,588
Residential	1	Residential Lighting	RLGT	2011	2,243,150	4,259,629	177,000,474	209,971,943	96,642,259	114,644,681	49,960	27,278
Residential	1	Residential Lighting	RLGT	2012	0	4,259,629	220,212,229	430,184,172	120,235,877	234,880,558	49,966	27,282
Residential	1	Residential Lighting	RLGT	2013	0	4,259,629	220,215,347	650,399,519	120,237,579	355,118,137	49,970	27,284
Residential	1	Residential Lighting	RLGT	2014	0	4,259,629	220,215,369	870,614,888	120,237,591	475,355,729	49,970	27,284
Residential	1	Residential Lighting	RLGT	2015	0	4,259,629	220,215,370	1,090,830,258	120,237,592	595,593,321	49,968	27,283



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	1	Residential Lighting	RLGT	2016	0	4,222,509	218,335,964	1,301,111,492	119,211,436	710,406,875	49,539	27,048
Residential	1	Residential Lighting	RLGT	2017	0	4,222,509	218,332,867	1,519,444,359	119,209,745	829,616,620	49,536	27,047
Residential	1	Residential Lighting	RLGT	2018	0	4,222,509	218,329,752	1,737,774,111	119,208,045	948,824,665	49,543	27,051
Residential	1	Residential Lighting	RLGT	2019	0	4,222,509	217,161,756	1,954,935,867	118,570,319	1,067,394,984	49,543	27,051
Residential	1	Residential Lighting	RLGT	2020	0	3,912,254	113,205,140	2,068,141,008	61,810,007	1,129,204,990	47,760	26,077
Residential	1	Residential Lighting	RLGT	2021	0	635,026	8,914,849	2,077,055,857	4,867,508	1,134,072,498	9,866	5,387
Residential	8	Residential Multifamily	RMFP	2021	9	9	30	30	27	27	0	0
Residential	8	Residential Multifamily	RMFP	2022	1,634	1,643	323,808	323,838	291,427	291,454	151	136
Residential	8	Residential Multifamily	RMFP	2023	0	1,643	797,539	1,121,377	717,785	1,009,239	165	149
Residential	8	Residential Multifamily	RMFP	2024	0	1,643	779,974	1,901,351	701,976	1,711,216	165	149
Residential	8	Residential Multifamily	RMFP	2025	0	1,643	766,893	2,668,244	690,204	2,401,420	157	141
Residential	8	Residential Multifamily	RMFP	2026	0	1,643	766,893	3,435,137	690,204	3,091,623	157	141
Residential	8	Residential Multifamily	RMFP	2027	0	1,643	670,634	4,105,771	603,571	3,695,194	157	142
Residential	8	Residential Multifamily	RMFP	2028	0	1,333	516,808	4,622,579	465,127	4,160,321	111	100
Residential	8	Residential Multifamily	RMFP	2029	0	1,333	512,625	5,135,204	461,363	4,621,684	111	100
Residential	8	Residential Multifamily	RMFP	2030	0	1,333	507,921	5,643,125	457,129	5,078,813	111	100
Residential	8	Residential Multifamily	RMFP	2031	0	1,170	502,516	6,145,641	452,264	5,531,077	111	100
Residential	8	Residential Multifamily	RMFP	2032	0	1,170	502,397	6,648,038	452,158	5,983,235	111	100
Residential	8	Residential Multifamily	RMFP	2033	0	1,170	502,357	7,150,395	452,121	6,435,356	111	100
Residential	8	Residential Multifamily	RMFP	2034	0	1,170	502,357	7,652,753	452,121	6,887,477	111	100
Residential	8	Residential Multifamily	RMFP	2035	0	1,170	502,353	8,155,106	452,118	7,339,595	111	100
Residential	8	Residential Multifamily	RMFP	2036	0	1,170	502,346	8,657,451	452,111	7,791,706	111	100
Residential	8	Residential Multifamily	RMFP	2037	0	1,163	493,037	9,150,488	443,734	8,235,439	108	97
Residential	8	Residential Multifamily	RMFP	2038	0	816	471,140	9,621,628	424,026	8,659,466	106	96
Residential	8	Residential Multifamily	RMFP	2039	0	816	418,113	10,039,741	376,302	9,035,767	93	84
Residential	8	Residential Multifamily	RMFP	2040	0	816	410,526	10,450,267	369,473	9,405,241	93	84
Residential	8	Residential Multifamily	RMFP	2041	0	816	355,828	10,806,095	320,245	9,725,486	87	78
Residential	8	Residential Multifamily	RMFP	2042	0	810	156,333	10,962,428	140,700	9,866,185	57	52
Residential	8	Residential Manufactured Housing	RMHP	2021	3	3	66	66	59	59	0	0
Residential	8	Residential Manufactured Housing	RMHP	2022	3	6	1,043	1,109	938	998	0	0
Residential	8	Residential Manufactured Housing	RMHP	2023	0	6	1,225	2,334	1,103	2,100	0	0
Residential	8	Residential Manufactured Housing	RMHP	2024	0	6	1,225	3,559	1,103	3,203	0	0
Residential	8	Residential Manufactured Housing	RMHP	2025	0	6	1,225	4,784	1,103	4,306	0	0
Residential	8	Residential Manufactured Housing	RMHP	2026	0	6	1,209	5,994	1,088	5,394	0	0
Residential	8	Residential Manufactured Housing	RMHP	2027	0	6	795	6,789	716	6,110	0	0
Residential	8	Residential Manufactured Housing	RMHP	2028	0	6	709	7,498	638	6,748	0	0
Residential	8	Residential Manufactured Housing	RMHP	2029	0	6	709	8,207	638	7,386	0	0
Residential	8	Residential Manufactured Housing	RMHP	2030	0	6	709	8,916	638	8,025	0	0
Residential	8	Residential Manufactured Housing	RMHP	2031	0	6	706	9,623	636	8,660	0	0
Residential	8	Residential Manufactured Housing	RMHP	2032	0	6	673	10,295	606	9,266	0	0
Residential	8	Residential Manufactured Housing	RMHP	2033	0	6	673	10,968	606	9,871	0	0
Residential	8	Residential Manufactured Housing	RMHP	2034	0	6	673	11,641	606	10,477	0	0
Residential	8	Residential Manufactured Housing	RMHP	2035	0	6	673	12,314	606	11,082	0	0
Residential	8	Residential Manufactured Housing	RMHP	2036	0	6	654	12,968	589	11,671	0	0
Residential	8	Residential Manufactured Housing	RMHP	2037	0	6	419	13,387	377	12,048	0	0
Residential	8	Residential Manufactured Housing	RMHP	2038	0	6	378	13,765	340	12,389	0	0
Residential	8	Residential Manufactured Housing	RMHP	2039	0	6	279	14,045	251	12,640	0	0
Residential	8	Residential Manufactured Housing	RMHP	2040	0	6	272	14,316	245	12,885	0	0
Residential	8	Residential Manufactured Housing	RMHP	2041	0	6	220	14,536	198	13,083	0	0
Residential	8	Residential Manufactured Housing	RMHP	2042	0	2	32	14,569	29	13,112	0	0
Residential	8	Residential New Construction	RNCR	2021	1,018	1,018	496,458	496,458	431,919	431,919	245	213
Residential	8	Residential New Construction	RNCR	2022	2,560	3,578	4,499,215	4,995,673	3,914,317	4,346,236	1,799	1,566
Residential	8	Residential New Construction	RNCR	2023	0	3,578	7,100,331	12,096,005	6,177,288	10,523,524	2,928	2,547
Residential	8	Residential New Construction	RNCR	2024	0	3,578	7,100,311	19,196,316	6,177,271	16,700,795	2,927	2,547



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	1	Residential Lighting	RLGT	2016	0	37,120	1,882,524	9,937,255	1,027,858	5,425,741	427	233
Residential	1	Residential Lighting	RLGT	2017	0	37,120	1,882,498	11,819,753	1,027,844	6,453,585	427	233
Residential	1	Residential Lighting	RLGT	2018	0	37,120	1,882,471	13,702,224	1,027,829	7,481,414	427	233
Residential	1	Residential Lighting	RLGT	2019	0	37,120	1,882,498	15,584,721	1,027,844	8,509,258	427	233
Residential	1	Residential Lighting	RLGT	2020	0	37,120	1,881,125	17,465,846	1,027,094	9,536,352	427	233
Residential	1	Residential Lighting	RLGT	2021	0	32,878	490,278	17,956,124	267,692	9,804,044	424	232
Residential	8	Residential Multifamily	RMFP	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2040	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2041	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Multifamily	RMFP	2042	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2040	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2041	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential Manufactured Housing	RMHP	2042	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential New Construction	RNCR	2021	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential New Construction	RNCR	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential New Construction	RNCR	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	8	Residential New Construction	RNCR	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	1	Residential Lighting	RLGT	2016	0	4,259,629	220,218,489	1,311,048,747	120,239,295	715,832,616	49,966	27,282
Residential	1	Residential Lighting	RLGT	2017	0	4,259,629	220,215,364	1,531,264,112	120,237,589	836,070,205	49,963	27,280
Residential	1	Residential Lighting	RLGT	2018	0	4,259,629	220,212,223	1,751,476,335	120,235,874	956,306,079	49,970	27,284
Residential	1	Residential Lighting	RLGT	2019	0	4,259,629	219,044,254	1,970,520,589	119,598,163	1,075,904,241	49,970	27,284
Residential	1	Residential Lighting	RLGT	2020	0	3,949,374	115,086,265	2,085,606,854	62,837,101	1,138,741,342	48,187	26,310
Residential	1	Residential Lighting	RLGT	2021	0	667,904	9,405,128	2,095,011,981	5,135,200	1,143,876,542	10,290	5,618
Residential	8	Residential Multifamily	RMFP	2021	9	9	30	30	27	27	0	0
Residential	8	Residential Multifamily	RMFP	2022	1,634	1,643	323,808	323,838	291,427	291,454	151	136
Residential	8	Residential Multifamily	RMFP	2023	0	1,643	797,539	1,121,377	717,785	1,009,239	165	149
Residential	8	Residential Multifamily	RMFP	2024	0	1,643	779,974	1,901,351	701,976	1,711,216	165	149
Residential	8	Residential Multifamily	RMFP	2025	0	1,643	766,893	2,668,244	690,204	2,401,420	157	141
Residential	8	Residential Multifamily	RMFP	2026	0	1,643	766,893	3,435,137	690,204	3,091,623	157	141
Residential	8	Residential Multifamily	RMFP	2027	0	1,643	670,634	4,105,771	603,571	3,695,194	157	142
Residential	8	Residential Multifamily	RMFP	2028	0	1,333	516,808	4,622,579	465,127	4,160,321	111	100
Residential	8	Residential Multifamily	RMFP	2029	0	1,333	512,625	5,135,204	461,363	4,621,684	111	100
Residential	8	Residential Multifamily	RMFP	2030	0	1,333	507,921	5,643,125	457,129	5,078,813	111	100
Residential	8	Residential Multifamily	RMFP	2031	0	1,170	502,516	6,145,641	452,264	5,531,077	111	100
Residential	8	Residential Multifamily	RMFP	2032	0	1,170	502,397	6,648,038	452,158	5,983,235	111	100
Residential	8	Residential Multifamily	RMFP	2033	0	1,170	502,357	7,150,395	452,121	6,435,356	111	100
Residential	8	Residential Multifamily	RMFP	2034	0	1,170	502,357	7,652,753	452,121	6,887,477	111	100
Residential	8	Residential Multifamily	RMFP	2035	0	1,170	502,353	8,155,106	452,118	7,339,595	111	100
Residential	8	Residential Multifamily	RMFP	2036	0	1,170	502,346	8,657,451	452,111	7,791,706	111	100
Residential	8	Residential Multifamily	RMFP	2037	0	1,163	493,037	9,150,488	443,734	8,235,439	108	97
Residential	8	Residential Multifamily	RMFP	2038	0	816	471,140	9,621,628	424,026	8,659,466	106	96
Residential	8	Residential Multifamily	RMFP	2039	0	816	418,113	10,039,741	376,302	9,035,767	93	84
Residential	8	Residential Multifamily	RMFP	2040	0	816	410,526	10,450,267	369,473	9,405,241	93	84
Residential	8	Residential Multifamily	RMFP	2041	0	816	355,828	10,806,095	320,245	9,725,486	87	78
Residential	8	Residential Multifamily	RMFP	2042	0	810	156,333	10,962,428	140,700	9,866,185	57	52
Residential	8	Residential Manufactured Housing	RMHP	2021	3	3	66	66	59	59	0	0
Residential	8	Residential Manufactured Housing	RMHP	2022	3	6	1,043	1,109	938	998	0	0
Residential	8	Residential Manufactured Housing	RMHP	2023	0	6	1,225	2,334	1,103	2,100	0	0
Residential	8	Residential Manufactured Housing	RMHP	2024	0	6	1,225	3,559	1,103	3,203	0	0
Residential	8	Residential Manufactured Housing	RMHP	2025	0	6	1,225	4,784	1,103	4,306	0	0
Residential	8	Residential Manufactured Housing	RMHP	2026	0	6	1,209	5,994	1,088	5,394	0	0
Residential	8	Residential Manufactured Housing	RMHP	2027	0	6	795	6,789	716	6,110	0	0
Residential	8	Residential Manufactured Housing	RMHP	2028	0	6	709	7,498	638	6,748	0	0
Residential	8	Residential Manufactured Housing	RMHP	2029	0	6	709	8,207	638	7,386	0	0
Residential	8	Residential Manufactured Housing	RMHP	2030	0	6	709	8,916	638	8,025	0	0
Residential	8	Residential Manufactured Housing	RMHP	2031	0	6	706	9,623	636	8,660	0	0
Residential	8	Residential Manufactured Housing	RMHP	2032	0	6	673	10,295	606	9,266	0	0
Residential	8	Residential Manufactured Housing	RMHP	2033	0	6	673	10,968	606	9,871	0	0
Residential	8	Residential Manufactured Housing	RMHP	2034	0	6	673	11,641	606	10,477	0	0
Residential	8	Residential Manufactured Housing	RMHP	2035	0	6	673	12,314	606	11,082	0	0
Residential	8	Residential Manufactured Housing	RMHP	2036	0	6	654	12,968	589	11,671	0	0
Residential	8	Residential Manufactured Housing	RMHP	2037	0	6	419	13,387	377	12,048	0	0
Residential	8	Residential Manufactured Housing	RMHP	2038	0	6	378	13,765	340	12,389	0	0
Residential	8	Residential Manufactured Housing	RMHP	2039	0	6	279	14,045	251	12,640	0	0
Residential	8	Residential Manufactured Housing	RMHP	2040	0	6	272	14,316	245	12,885	0	0
Residential	8	Residential Manufactured Housing	RMHP	2041	0	6	220	14,536	198	13,083	0	0
Residential	8	Residential Manufactured Housing	RMHP	2042	0	2	32	14,569	29	13,112	0	0
Residential	8	Residential New Construction	RNCR	2021	1,018	1,018	496,458	496,458	431,919	431,919	245	213
Residential	8	Residential New Construction	RNCR	2022	2,560	3,578	4,499,215	4,995,673	3,914,317	4,346,236	1,799	1,566
Residential	8	Residential New Construction	RNCR	2023	0	3,578	7,100,331	12,096,005	6,177,288	10,523,524	2,928	2,547
Residential	8	Residential New Construction	RNCR	2024	0	3,578	7,100,311	19,196,316	6,177,271	16,700,795	2,927	2,547



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	8	Residential New Construction	RNCR	2025	0	3,578	7,100,331	26,296,647	6,177,288	22,878,083	2,928	2,547
Residential	8	Residential New Construction	RNCR	2026	0	3,578	7,100,331	33,396,978	6,177,288	29,055,371	2,928	2,547
Residential	8	Residential New Construction	RNCR	2027	0	3,578	7,100,352	40,497,331	6,177,307	35,232,678	2,928	2,547
Residential	8	Residential New Construction	RNCR	2028	0	3,578	7,100,331	47,597,662	6,177,288	41,409,966	2,928	2,547
Residential	8	Residential New Construction	RNCR	2029	0	3,578	7,100,311	54,697,973	6,177,270	47,587,236	2,928	2,547
Residential	8	Residential New Construction	RNCR	2030	0	3,578	7,100,332	61,798,305	6,177,289	53,764,525	2,927	2,547
Residential	8	Residential New Construction	RNCR	2031	0	3,578	7,100,331	68,898,636	6,177,288	59,941,813	2,928	2,547
Residential	8	Residential New Construction	RNCR	2032	0	3,578	7,100,352	75,998,988	6,177,306	66,119,120	2,928	2,547
Residential	8	Residential New Construction	RNCR	2033	0	3,578	7,100,332	83,099,320	6,177,288	72,296,408	2,928	2,547
Residential	8	Residential New Construction	RNCR	2034	0	3,578	7,100,331	90,199,651	6,177,288	78,473,696	2,928	2,547
Residential	8	Residential New Construction	RNCR	2035	0	3,578	7,100,311	97,299,962	6,177,270	84,650,967	2,928	2,547
Residential	8	Residential New Construction	RNCR	2036	0	3,578	7,100,332	104,400,294	6,177,289	90,828,255	2,928	2,547
Residential	8	Residential New Construction	RNCR	2037	0	3,578	7,100,331	111,500,625	6,177,288	97,005,544	2,928	2,547
Residential	8	Residential New Construction	RNCR	2038	0	3,578	7,100,352	118,600,977	6,177,307	103,182,850	2,928	2,547
Residential	8	Residential New Construction	RNCR	2039	0	3,578	7,100,331	125,701,309	6,177,288	109,360,138	2,928	2,547
Residential	8	Residential New Construction	RNCR	2040	0	3,578	7,100,311	132,801,619	6,177,270	115,537,409	2,928	2,547
Residential	8	Residential New Construction	RNCR	2041	0	3,578	7,100,332	139,901,951	6,177,289	121,714,697	2,927	2,547
Residential	8	Residential New Construction	RNCR	2042	0	3,578	7,100,331	147,002,283	6,177,288	127,891,986	2,928	2,547
Residential	8	Residential New Construction	RNCR	2043	0	3,578	7,100,331	154,102,614	6,177,288	134,069,274	2,928	2,547
Residential	8	Residential New Construction	RNCR	2044	0	3,578	7,099,650	161,202,264	6,176,696	140,245,970	2,928	2,547
Residential	8	Residential New Construction	RNCR	2045	0	3,578	586,304	161,788,568	510,084	140,756,054	130,672	113,685
Residential	9	Residential Smart Home	RSMH	2022	15	15	1,777	1,777	1,511	1,511	1	1
Residential	9	Residential Smart Home	RSMH	2023	0	15	8,086	9,864	6,874	8,384	1	1
Residential	9	Residential Smart Home	RSMH	2024	0	15	8,086	17,950	6,873	15,258	1	1
Residential	9	Residential Smart Home	RSMH	2025	0	15	8,086	26,037	6,874	22,131	1	1
Residential	9	Residential Smart Home	RSMH	2026	0	15	8,086	34,123	6,874	29,005	1	1
Residential	9	Residential Smart Home	RSMH	2027	0	15	7,041	41,164	5,985	34,990	1	1
Residential	9	Residential Smart Home	RSMH	2028	0	15	3,035	44,200	2,580	37,570	1	1
Residential	9	Residential Smart Home	RSMH	2029	0	15	3,035	47,235	2,580	40,150	1	1
Residential	9	Residential Smart Home	RSMH	2030	0	15	1,563	48,798	1,328	41,478	1	1
Residential	9	Residential Smart Home	RSMH	2031	0	15	703	49,500	597	42,075	0	0
Residential	9	Residential Smart Home	RSMH	2032	0	15	560	50,060	476	42,551	0	0
Residential	9	Residential Smart Home	RSMH	2033	0	15	10	50,070	8	42,559	0	0
Residential	9	Residential Smart Home	RSMH	2034	0	15	10	50,079	8	42,568	0	0
Residential	9	Residential Smart Home	RSMH	2035	0	15	10	50,089	8	42,576	0	0
Residential	9	Residential Smart Home	RSMH	2036	0	15	10	50,099	8	42,584	0	0
Residential	9	Residential Smart Home	RSMH	2037	0	15	8	50,107	6	42,591	0	0
Residential	8	Residential Smart Thermostat Rewards	RTDR	2020	0	0	0	0	0	0	0	0
Residential	8	Residential Smart Thermostat Rewards	RTDR	2021	38,637	38,637	0	0	0	0	0	0
Residential	8	Residential Smart Thermostat Rewards	RTDR	2022	6,903	45,540	0	0	0	0	0	0
Residential	8	Residential WeatherSmart	RTEB	2021	1,467	1,467	95,829	95,829	91,038	91,038	117	111
Residential	8	Residential WeatherSmart	RTEB	2022	1,941	1,941	291,588	387,417	277,009	368,046	227	216
Residential	8	Residential WeatherSmart	RTEB	2023	0	1,949	75,982	463,399	72,183	440,229	89	84
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2021	3,854	3,854	455,830	455,830	364,664	364,664	713	570
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2022	5,695	9,549	1,913,632	2,369,462	1,530,905	1,895,570	1,724	1,379
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2023	0	9,549	2,811,752	5,181,214	2,249,401	4,144,971	2,561	2,049
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2024	0	9,549	2,811,589	7,992,803	2,249,271	6,394,242	2,559	2,048
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2025	0	9,549	2,811,753	10,804,556	2,249,403	8,643,645	2,560	2,048
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2026	0	9,549	2,811,753	13,616,309	2,249,402	10,893,047	2,561	2,049
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2027	0	9,549	2,811,916	16,428,225	2,249,533	13,142,580	2,562	2,050
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2028	0	9,549	2,734,177	19,162,402	2,187,342	15,329,921	2,559	2,047
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2029	0	8,156	1,801,870	20,964,272	1,441,496	16,771,417	2,223	1,778
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2030	0	3,076	411,157	21,375,429	328,926	17,100,343	850	680
Residential	7	Residential Home Energy Assessment	RTHO	2020	2,738	2,738	2,181,783	2,181,783	479,992	479,992	1,940	427
Residential	7	Residential Home Energy Assessment	RTHO	2021	9,917	12,655	16,774,260	18,956,043	3,808,473	4,288,465	11,239	2,566
Residential	7	Residential Home Energy Assessment	RTHO	2022	6,509	19,164	34,248,385	53,204,428	8,964,259	13,252,724	16,271	4,578
Residential	7	Residential Home Energy Assessment	RTHO	2023	0	19,164	40,229,506	93,433,934	11,356,707	24,609,430	16,545	4,660
Residential	7	Residential Home Energy Assessment	RTHO	2024	0	19,164	40,229,033	133,662,966	11,356,573	35,966,004	16,550	4,662
Residential	7	Residential Home Energy Assessment	RTHO	2025	0	19,164	40,229,504	173,892,471	11,356,706	47,322,710	16,549	4,661
Residential	7	Residential Home Energy Assessment	RTHO	2026	0	19,164	40,229,502	214,121,972	11,356,706	58,679,416	16,549	4,661
Residential	7	Residential Home Energy Assessment	RTHO	2027	0	19,164	40,229,975	254,351,948	11,356,840	70,036,255	16,542	4,659
Residential	7	Residential Home Energy Assessment	RTHO	2028	0	19,164	40,229,506	294,581,454	11,356,707	81,392,963	16,543	4,660
Residential	7	Residential Home Energy Assessment	RTHO	2029	0	19,164	40,229,033	334,810,487	11,356,573	92,749,536	16,549	4,661



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC								
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)	
Residential	8	Residential New Construction	RNCR	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2036	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2037	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2038	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2039	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2040	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2041	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2042	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2043	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2044	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	8	Residential New Construction	RNCR	2045	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	
Residential	9	Residential Smart Home	RSMH	2022	1	1	42	42	36	36	0	0	
Residential	9	Residential Smart Home	RSMH	2023	0	1	383	425	326	361	0	0	
Residential	9	Residential Smart Home	RSMH	2024	0	1	383	808	326	687	0	0	
Residential	9	Residential Smart Home	RSMH	2025	0	1	383	1,192	326	1,013	0	0	
Residential	9	Residential Smart Home	RSMH	2026	0	1	383	1,575	326	1,339	0	0	
Residential	9	Residential Smart Home	RSMH	2027	0	1	348	1,923	295	1,634	0	0	
Residential	9	Residential Smart Home	RSMH	2028	0	1	47	1,969	40	1,674	0	0	
Residential	9	Residential Smart Home	RSMH	2029	0	1	47	2,016	40	1,713	0	0	
Residential	9	Residential Smart Home	RSMH	2030	0	1	47	2,062	40	1,753	0	0	
Residential	9	Residential Smart Home	RSMH	2031	0	1	47	2,109	40	1,793	0	0	
Residential	9	Residential Smart Home	RSMH	2032	0	1	42	2,151	35	1,828	0	0	
Residential	9	Residential Smart Home	RSMH	2033	0	1	0	2,151	0	1,829	0	0	
Residential	9	Residential Smart Home	RSMH	2034	0	1	0	2,152	0	1,829	0	0	
Residential	9	Residential Smart Home	RSMH	2035	0	1	0	2,152	0	1,829	0	0	
Residential	9	Residential Smart Home	RSMH	2036	0	1	0	2,152	0	1,830	0	0	
Residential	9	Residential Smart Home	RSMH	2037	0	1	0	2,153	0	1,830	0	0	
Residential	8	Residential Smart Thermostat Rewards	RTDR	2020	0	0	0	0	0	0	0	0	
Residential	8	Residential Smart Thermostat Rewards	RTDR	2021	405	405	0	0	0	0	0	0	
Residential	8	Residential Smart Thermostat Rewards	RTDR	2022	95	500	0	0	0	0	0	0	
Residential	8	Residential WeatherSmart	RTEB	2021	27	27	2,125	2,125	2,019	2,019	3	3	
Residential	8	Residential WeatherSmart	RTEB	2022	50	50	8,214	10,339	7,803	9,822	6	6	
Residential	8	Residential WeatherSmart	RTEB	2023	0	51	5,677	16,016	5,393	15,215	7	6	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2021	44	44	3,128	3,128	2,502	2,502	7	6	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2022	215	259	37,910	41,038	30,328	32,830	49	39	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2023	0	259	78,568	119,606	62,854	95,685	72	57	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2024	0	259	78,563	198,169	62,851	158,535	72	57	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2025	0	259	78,568	276,737	62,854	221,389	72	57	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2026	0	259	78,568	355,305	62,854	284,244	72	57	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2027	0	259	78,572	433,877	62,858	347,102	72	57	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2028	0	259	78,568	512,445	62,854	409,956	72	57	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2029	0	257	68,865	581,310	55,092	465,048	72	57	
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2030	0	160	21,103	602,413	16,883	481,931	47	37	
Residential	7	Residential Home Energy Assessment	RTHO	2020	17	17	3,837	3,837	844	844	7	2	
Residential	7	Residential Home Energy Assessment	RTHO	2021	32	49	54,431	58,268	12,325	13,169	35	8	
Residential	7	Residential Home Energy Assessment	RTHO	2022	18	67	99,803	158,071	24,391	37,560	47	13	
Residential	7	Residential Home Energy Assessment	RTHO	2023	0	67	118,791	276,862	31,986	69,546	48	13	
Residential	7	Residential Home Energy Assessment	RTHO	2024	0	67	118,805	395,668	31,990	101,536	48	13	
Residential	7	Residential Home Energy Assessment	RTHO	2025	0	67	118,791	514,459	31,986	133,522	48	13	
Residential	7	Residential Home Energy Assessment	RTHO	2026	0	67	118,791	633,250	31,986	165,508	48	13	
Residential	7	Residential Home Energy Assessment	RTHO	2027	0	67	118,777	752,027	31,982	197,490	48	13	
Residential	7	Residential Home Energy Assessment	RTHO	2028	0	67	118,791	870,818	31,986	229,476	48	13	
Residential	7	Residential Home Energy Assessment	RTHO	2029	0	67	118,805	989,623	31,990	261,466	48	13	



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	8	Residential New Construction	RNCR	2025	0	3,578	7,100,331	26,296,647	6,177,288	22,878,083	2,928	2,547
Residential	8	Residential New Construction	RNCR	2026	0	3,578	7,100,331	33,396,978	6,177,288	29,055,371	2,928	2,547
Residential	8	Residential New Construction	RNCR	2027	0	3,578	7,100,352	40,497,331	6,177,307	35,232,678	2,928	2,547
Residential	8	Residential New Construction	RNCR	2028	0	3,578	7,100,331	47,597,662	6,177,288	41,409,966	2,928	2,547
Residential	8	Residential New Construction	RNCR	2029	0	3,578	7,100,311	54,697,973	6,177,270	47,587,236	2,928	2,547
Residential	8	Residential New Construction	RNCR	2030	0	3,578	7,100,332	61,798,305	6,177,289	53,764,525	2,927	2,547
Residential	8	Residential New Construction	RNCR	2031	0	3,578	7,100,331	68,898,636	6,177,288	59,941,813	2,928	2,547
Residential	8	Residential New Construction	RNCR	2032	0	3,578	7,100,352	75,998,988	6,177,306	66,119,120	2,928	2,547
Residential	8	Residential New Construction	RNCR	2033	0	3,578	7,100,332	83,099,320	6,177,288	72,296,408	2,928	2,547
Residential	8	Residential New Construction	RNCR	2034	0	3,578	7,100,331	90,199,651	6,177,288	78,473,696	2,928	2,547
Residential	8	Residential New Construction	RNCR	2035	0	3,578	7,100,311	97,299,962	6,177,270	84,650,967	2,928	2,547
Residential	8	Residential New Construction	RNCR	2036	0	3,578	7,100,332	104,400,294	6,177,289	90,828,255	2,928	2,547
Residential	8	Residential New Construction	RNCR	2037	0	3,578	7,100,331	111,500,625	6,177,288	97,005,544	2,928	2,547
Residential	8	Residential New Construction	RNCR	2038	0	3,578	7,100,352	118,600,977	6,177,307	103,182,500	2,928	2,547
Residential	8	Residential New Construction	RNCR	2039	0	3,578	7,100,331	125,701,309	6,177,288	109,360,138	2,928	2,547
Residential	8	Residential New Construction	RNCR	2040	0	3,578	7,100,311	132,801,619	6,177,270	115,537,409	2,928	2,547
Residential	8	Residential New Construction	RNCR	2041	0	3,578	7,100,332	139,901,951	6,177,289	121,714,697	2,927	2,547
Residential	8	Residential New Construction	RNCR	2042	0	3,578	7,100,331	147,002,283	6,177,288	127,891,986	2,928	2,547
Residential	8	Residential New Construction	RNCR	2043	0	3,578	7,100,331	154,102,614	6,177,288	134,069,274	2,928	2,547
Residential	8	Residential New Construction	RNCR	2044	0	3,578	7,099,650	161,202,264	6,176,696	140,245,970	2,928	2,547
Residential	8	Residential New Construction	RNCR	2045	0	3,578	586,304	161,788,568	510,084	140,756,054	130,672	113,685
Residential	9	Residential Smart Home	RSMH	2022	16	16	1,819	1,819	1,546	1,546	1	1
Residential	9	Residential Smart Home	RSMH	2023	0	16	8,470	10,289	7,199	8,746	2	1
Residential	9	Residential Smart Home	RSMH	2024	0	16	8,470	18,759	7,199	15,945	2	1
Residential	9	Residential Smart Home	RSMH	2025	0	16	8,470	27,228	7,199	23,144	2	1
Residential	9	Residential Smart Home	RSMH	2026	0	16	8,470	35,698	7,199	30,343	2	1
Residential	9	Residential Smart Home	RSMH	2027	0	16	7,389	43,087	6,281	36,624	2	1
Residential	9	Residential Smart Home	RSMH	2028	0	16	3,082	46,169	2,620	39,244	1	1
Residential	9	Residential Smart Home	RSMH	2029	0	16	3,082	49,251	2,619	41,863	1	1
Residential	9	Residential Smart Home	RSMH	2030	0	16	1,610	50,860	1,368	43,231	1	1
Residential	9	Residential Smart Home	RSMH	2031	0	16	749	51,609	637	43,868	0	0
Residential	9	Residential Smart Home	RSMH	2032	0	16	601	52,211	511	44,379	0	0
Residential	9	Residential Smart Home	RSMH	2033	0	16	10	52,221	9	44,388	0	0
Residential	9	Residential Smart Home	RSMH	2034	0	16	10	52,231	9	44,396	0	0
Residential	9	Residential Smart Home	RSMH	2035	0	16	10	52,241	9	44,405	0	0
Residential	9	Residential Smart Home	RSMH	2036	0	16	10	52,251	9	44,414	0	0
Residential	9	Residential Smart Home	RSMH	2037	0	16	8	52,259	7	44,421	0	0
Residential	8	Residential Smart Thermostat Rewards	RTDR	2020	0	0	0	0	0	0	0	0
Residential	8	Residential Smart Thermostat Rewards	RTDR	2021	39,042	39,042	0	0	0	0	0	0
Residential	8	Residential Smart Thermostat Rewards	RTDR	2022	6,998	46,040	0	0	0	0	0	0
Residential	8	Residential WeatherSmart	RTEB	2021	1,494	1,494	97,954	97,954	93,056	93,056	120	114
Residential	8	Residential WeatherSmart	RTEB	2022	1,991	1,991	299,802	397,756	284,812	377,868	233	222
Residential	8	Residential WeatherSmart	RTEB	2023	0	2,000	81,659	479,415	77,576	455,444	95	90
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2021	3,898	3,898	458,958	458,958	367,167	367,167	720	576
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2022	5,910	9,808	1,951,542	2,410,500	1,561,233	1,928,400	1,773	1,419
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2023	0	9,808	2,890,320	5,300,820	2,312,256	4,240,656	2,633	2,106
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2024	0	9,808	2,890,152	8,190,972	2,312,122	6,552,777	2,631	2,105
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2025	0	9,808	2,890,321	11,081,293	2,312,257	8,865,034	2,631	2,105
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2026	0	9,808	2,890,321	13,971,614	2,312,257	11,177,291	2,633	2,106
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2027	0	9,808	2,890,488	16,862,102	2,312,390	13,489,681	2,634	2,107
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2028	0	9,808	2,812,745	19,674,847	2,250,196	15,739,877	2,631	2,105
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2029	0	8,413	1,870,735	21,545,582	1,496,588	17,236,465	2,294	1,836
Residential	8	Residential Thermostat Purchase and WeatherSmart	RTEE	2030	0	3,236	432,261	21,977,842	345,808	17,582,274	897	717
Residential	7	Residential Home Energy Assessment	RTHO	2020	2,755	2,755	2,185,620	2,185,620	480,836	480,836	1,948	428
Residential	7	Residential Home Energy Assessment	RTHO	2021	9,949	12,704	16,828,691	19,014,311	3,820,798	4,301,634	11,274	2,574
Residential	7	Residential Home Energy Assessment	RTHO	2022	6,527	19,231	34,348,188	53,362,499	8,988,649	13,290,284	16,318	4,591
Residential	7	Residential Home Energy Assessment	RTHO	2023	0	19,231	40,348,297	93,710,796	11,388,693	24,678,977	16,593	4,673
Residential	7	Residential Home Energy Assessment	RTHO	2024	0	19,231	40,347,838	134,058,634	11,388,563	36,067,540	16,598	4,675
Residential	7	Residential Home Energy Assessment	RTHO	2025	0	19,231	40,348,295	174,406,929	11,388,692	47,456,232	16,597	4,674
Residential	7	Residential Home Energy Assessment	RTHO	2026	0	19,231	40,348,293	214,755,222	11,388,692	58,844,924	16,597	4,674
Residential	7	Residential Home Energy Assessment	RTHO	2027	0	19,231	40,348,752	255,103,975	11,388,822	70,233,745	16,590	4,672
Residential	7	Residential Home Energy Assessment	RTHO	2028	0	19,231	40,348,298	295,452,272	11,388,693	81,622,438	16,590	4,672
Residential	7	Residential Home Energy Assessment	RTHO	2029	0	19,231	40,347,838	335,800,110	11,388,563	93,011,002	16,597	4,674



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	7	Residential Home Energy Assessment	RTHO	2030	0	19,164	40,229,504	375,039,991	11,356,706	104,106,242	16,549	4,661
Residential	7	Residential Home Energy Assessment	RTHO	2031	0	19,164	40,229,503	415,269,495	11,356,706	115,462,949	16,549	4,661
Residential	7	Residential Home Energy Assessment	RTHO	2032	0	19,164	39,599,006	454,868,500	11,218,026	126,680,975	16,547	4,661
Residential	7	Residential Home Energy Assessment	RTHO	2033	0	18,090	33,408,479	488,276,979	9,828,242	136,509,216	15,602	4,434
Residential	7	Residential Home Energy Assessment	RTHO	2034	0	10,492	13,255,510	501,532,490	4,902,275	141,411,491	9,713	3,092
Residential	7	Residential Home Energy Assessment	RTHO	2035	0	2,720	1,447,672	502,980,161	579,069	141,990,560	2,370	948
Residential	9	Residential Virtual Energy Audit	RVAU	2022	2,149	2,149	600,393	600,393	360,236	360,236	469	282
Residential	9	Residential Virtual Energy Audit	RVAU	2023	0	2,149	1,972,634	2,573,027	1,183,580	1,543,816	495	297
Residential	9	Residential Virtual Energy Audit	RVAU	2024	0	2,149	1,972,624	4,545,651	1,183,575	2,727,391	483	290
Residential	9	Residential Virtual Energy Audit	RVAU	2025	0	2,149	1,972,634	6,518,285	1,183,580	3,910,971	496	297
Residential	9	Residential Virtual Energy Audit	RVAU	2026	0	2,149	1,972,634	8,490,919	1,183,580	5,094,551	495	297
Residential	9	Residential Virtual Energy Audit	RVAU	2027	0	2,149	1,900,725	10,391,644	1,140,435	6,234,986	495	297
Residential	9	Residential Virtual Energy Audit	RVAU	2028	0	2,041	1,738,368	12,130,012	1,043,021	7,278,007	448	269
Residential	9	Residential Virtual Energy Audit	RVAU	2029	0	2,041	1,738,360	13,868,372	1,043,016	8,321,023	461	277
Residential	9	Residential Virtual Energy Audit	RVAU	2030	0	2,041	1,738,368	15,606,740	1,043,021	9,364,044	462	277
Residential	9	Residential Virtual Energy Audit	RVAU	2031	0	2,041	1,738,368	17,345,108	1,043,021	10,407,065	462	277
Residential	9	Residential Virtual Energy Audit	RVAU	2032	0	2,041	1,525,747	18,870,855	915,448	11,322,513	448	269
Residential	9	Residential Virtual Energy Audit	RVAU	2033	0	2,041	1,011,487	19,882,342	606,892	11,929,405	245	147
Residential	9	Residential Virtual Energy Audit	RVAU	2034	0	2,041	1,011,487	20,893,830	606,892	12,536,298	245	147
Residential	9	Residential Virtual Energy Audit	RVAU	2035	0	2,041	1,011,482	21,905,312	606,889	13,143,187	245	147
Residential	9	Residential Virtual Energy Audit	RVAU	2036	0	2,041	1,011,487	22,916,799	606,892	13,750,079	245	147
Residential	9	Residential Virtual Energy Audit	RVAU	2037	0	2,041	921,923	23,838,722	553,154	14,303,233	242	145
Residential	9	Residential Virtual Energy Audit	RVAU	2038	0	1,850	706,261	24,544,983	423,757	14,726,990	195	117
Residential	9	Residential Virtual Energy Audit	RVAU	2039	0	1,850	706,256	25,251,239	423,754	15,150,743	196	117
Residential	9	Residential Virtual Energy Audit	RVAU	2040	0	1,850	706,252	25,957,491	423,751	15,574,495	195	117
Residential	9	Residential Virtual Energy Audit	RVAU	2041	0	1,850	706,256	26,663,747	423,754	15,998,248	196	117
Residential	9	Residential Virtual Energy Audit	RVAU	2042	0	1,850	374,201	27,037,948	224,521	16,222,769	189	113
Residential	9	Residential Water Savings	RWEE	2022	62	62	13,984	13,984	12,585	12,585	30	27
Residential	9	Residential Water Savings	RWEE	2023	0	62	97,694	111,678	87,925	100,510	31	28
Residential	9	Residential Water Savings	RWEE	2024	0	62	97,694	209,371	87,924	188,434	31	28
Residential	9	Residential Water Savings	RWEE	2025	0	62	97,694	307,065	87,925	276,359	31	28
Residential	9	Residential Water Savings	RWEE	2026	0	62	97,694	404,759	87,925	364,283	31	28
Residential	9	Residential Water Savings	RWEE	2027	0	62	97,694	502,454	87,925	452,208	31	28
Residential	9	Residential Water Savings	RWEE	2028	0	62	97,694	600,148	87,925	540,133	31	28
Residential	9	Residential Water Savings	RWEE	2029	0	62	97,694	697,841	87,924	628,057	31	28
Residential	9	Residential Water Savings	RWEE	2030	0	62	97,694	795,535	87,925	715,982	31	28
Residential	9	Residential Water Savings	RWEE	2031	0	62	97,694	893,229	87,925	803,906	31	28
Residential	9	Residential Water Savings	RWEE	2032	0	62	91,733	984,962	82,560	886,466	31	28
Residential	9	Residential Water Savings	RWEE	2033	0	42	59,652	1,044,614	53,686	940,152	17	15
Residential	9	Residential Water Savings	RWEE	2034	0	42	59,652	1,104,265	53,686	993,839	17	15
Residential	9	Residential Water Savings	RWEE	2035	0	42	51,881	1,156,147	46,693	1,040,532	17	15
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2021	307	307	783,612	783,612	685,239	685,239	395	346
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2022	591	898	5,346,479	6,130,091	4,687,647	5,372,886	1,500	1,328
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2023	0	898	7,548,860	13,678,951	6,621,804	11,994,691	1,889	1,677
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2024	0	898	7,548,866	21,227,817	6,621,810	18,616,500	1,887	1,675
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2025	0	898	7,548,861	28,776,678	6,621,805	25,238,305	1,888	1,675
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2026	0	898	7,502,314	36,278,991	6,578,516	31,816,821	1,877	1,665
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2027	0	847	7,293,285	43,572,276	6,384,120	38,200,941	1,734	1,531
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2028	0	710	7,176,555	50,748,831	6,275,561	44,476,501	1,634	1,438
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2029	0	710	7,176,562	57,925,393	6,275,566	50,752,068	1,631	1,435
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2030	0	710	7,175,480	65,100,873	6,274,561	57,026,628	1,631	1,435
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2031	0	708	6,743,830	71,844,703	5,897,730	62,924,358	1,629	1,433
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2032	0	648	3,062,915	74,907,618	2,687,294	65,611,652	1,118	976
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2033	0	532	322,980	75,230,598	298,547	65,910,200	255	237
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2034	0	519	291,958	75,522,556	271,521	66,181,721	254	236
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2035	0	519	291,958	75,814,514	271,521	66,453,242	254	236



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					NC							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	7	Residential Home Energy Assessment	RTHO	2030	0	67	118,791	1,108,414	31,986	293,452	48	13
Residential	7	Residential Home Energy Assessment	RTHO	2031	0	67	118,791	1,227,205	31,986	325,438	48	13
Residential	7	Residential Home Energy Assessment	RTHO	2032	0	67	118,476	1,345,682	31,916	357,354	48	13
Residential	7	Residential Home Energy Assessment	RTHO	2033	0	58	99,000	1,444,682	27,565	384,919	47	13
Residential	7	Residential Home Energy Assessment	RTHO	2034	0	29	34,159	1,478,841	12,443	397,362	23	7
Residential	7	Residential Home Energy Assessment	RTHO	2035	0	11	6,509	1,485,350	2,603	399,965	9	4
Residential	9	Residential Virtual Energy Audit	RVAU	2022	39	39	13,110	13,110	7,866	7,866	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2023	0	39	40,748	53,859	24,449	32,315	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2024	0	39	40,748	94,607	24,449	56,764	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2025	0	39	40,748	135,356	24,449	81,213	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2026	0	39	40,748	176,104	24,449	105,662	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2027	0	39	39,418	215,522	23,651	129,313	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2028	0	38	36,708	252,230	22,025	151,338	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2029	0	38	36,708	288,939	22,025	173,363	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2030	0	38	36,708	325,647	22,025	195,388	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2031	0	38	36,708	362,356	22,025	217,413	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2032	0	38	31,530	393,886	18,918	236,331	10	6
Residential	9	Residential Virtual Energy Audit	RVAU	2033	0	38	20,388	414,274	12,233	248,564	5	3
Residential	9	Residential Virtual Energy Audit	RVAU	2034	0	38	20,388	434,662	12,233	260,797	5	3
Residential	9	Residential Virtual Energy Audit	RVAU	2035	0	38	20,388	455,050	12,233	273,030	5	3
Residential	9	Residential Virtual Energy Audit	RVAU	2036	0	38	20,388	475,438	12,233	285,263	5	3
Residential	9	Residential Virtual Energy Audit	RVAU	2037	0	38	18,154	493,592	10,893	296,155	5	3
Residential	9	Residential Virtual Energy Audit	RVAU	2038	0	37	12,960	506,552	7,776	303,931	4	2
Residential	9	Residential Virtual Energy Audit	RVAU	2039	0	37	12,960	519,512	7,776	311,707	4	2
Residential	9	Residential Virtual Energy Audit	RVAU	2040	0	37	12,960	532,471	7,776	319,483	4	2
Residential	9	Residential Virtual Energy Audit	RVAU	2041	0	37	12,960	545,431	7,776	327,258	4	2
Residential	9	Residential Virtual Energy Audit	RVAU	2042	0	37	6,675	552,106	4,005	331,263	4	2
Residential	9	Residential Water Savings	RWEE	2022	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2023	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2024	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2025	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2026	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2027	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2028	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2029	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2030	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2031	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2032	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2033	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2034	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Residential	9	Residential Water Savings	RWEE	2035	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2021	8	8	38,021	38,021	33,173	33,173	28	24
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2022	8	16	330,898	368,919	289,022	322,195	98	86
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2023	0	16	473,533	842,452	413,442	735,638	102	89
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2024	0	16	473,504	1,315,957	413,417	1,149,055	102	89
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2025	0	16	473,533	1,789,489	413,442	1,562,497	102	89
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2026	0	16	473,533	2,263,022	413,442	1,975,939	102	89
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2027	0	16	472,420	2,735,442	412,406	2,388,345	101	88
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2028	0	16	472,364	3,207,806	412,355	2,800,700	101	88
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2029	0	16	472,336	3,680,142	412,331	3,213,031	101	88
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2030	0	16	472,364	4,152,506	412,355	3,625,386	101	88
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2031	0	16	458,512	4,611,018	400,255	4,025,641	101	88
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2032	0	11	200,430	4,811,448	175,062	4,200,703	71	62
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2033	0	4	6,458	4,817,906	5,920	4,206,623	4	4
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2034	0	3	5,003	4,822,909	4,652	4,211,276	4	4
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2035	0	3	5,002	4,827,911	4,652	4,215,928	4	4



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Residential	7	Residential Home Energy Assessment	RTHO	2030	0	19,231	40,348,295	376,148,406	11,388,692	104,399,694	16,597	4,674
Residential	7	Residential Home Energy Assessment	RTHO	2031	0	19,231	40,348,294	416,496,700	11,388,692	115,788,386	16,597	4,674
Residential	7	Residential Home Energy Assessment	RTHO	2032	0	19,231	39,717,482	456,214,182	11,249,942	127,038,328	16,595	4,674
Residential	7	Residential Home Energy Assessment	RTHO	2033	0	18,148	33,507,479	489,721,661	9,855,806	136,894,135	15,649	4,447
Residential	7	Residential Home Energy Assessment	RTHO	2034	0	10,521	13,289,669	503,011,331	4,914,718	141,808,853	9,736	3,100
Residential	7	Residential Home Energy Assessment	RTHO	2035	0	2,731	1,454,181	504,465,511	581,672	142,390,525	2,379	952
Residential	9	Residential Virtual Energy Audit	RVAU	2022	2,188	2,188	613,503	613,503	368,102	368,102	479	288
Residential	9	Residential Virtual Energy Audit	RVAU	2023	0	2,188	2,013,382	2,626,885	1,208,029	1,576,131	506	303
Residential	9	Residential Virtual Energy Audit	RVAU	2024	0	2,188	2,013,373	4,640,258	1,208,024	2,784,155	493	296
Residential	9	Residential Virtual Energy Audit	RVAU	2025	0	2,188	2,013,382	6,653,641	1,208,029	3,992,184	506	304
Residential	9	Residential Virtual Energy Audit	RVAU	2026	0	2,188	2,013,382	8,667,023	1,208,029	5,200,214	506	304
Residential	9	Residential Virtual Energy Audit	RVAU	2027	0	2,188	1,940,143	10,607,166	1,164,086	6,364,300	506	303
Residential	9	Residential Virtual Energy Audit	RVAU	2028	0	2,079	1,775,076	12,382,242	1,065,046	7,429,345	458	275
Residential	9	Residential Virtual Energy Audit	RVAU	2029	0	2,079	1,775,069	14,157,311	1,065,041	8,494,387	472	283
Residential	9	Residential Virtual Energy Audit	RVAU	2030	0	2,079	1,775,076	15,932,387	1,065,046	9,559,432	472	283
Residential	9	Residential Virtual Energy Audit	RVAU	2031	0	2,079	1,775,076	17,707,464	1,065,046	10,624,478	472	283
Residential	9	Residential Virtual Energy Audit	RVAU	2032	0	2,079	1,557,277	19,264,741	934,366	11,558,844	458	275
Residential	9	Residential Virtual Energy Audit	RVAU	2033	0	2,079	1,031,875	20,296,616	619,125	12,177,970	250	150
Residential	9	Residential Virtual Energy Audit	RVAU	2034	0	2,079	1,031,875	21,328,491	619,125	12,797,095	250	150
Residential	9	Residential Virtual Energy Audit	RVAU	2035	0	2,079	1,031,870	22,360,361	619,122	13,416,217	250	150
Residential	9	Residential Virtual Energy Audit	RVAU	2036	0	2,079	1,031,875	23,392,237	619,125	14,035,342	250	150
Residential	9	Residential Virtual Energy Audit	RVAU	2037	0	2,079	940,077	24,332,314	564,046	14,599,388	247	148
Residential	9	Residential Virtual Energy Audit	RVAU	2038	0	1,887	719,221	25,051,535	431,532	15,030,921	199	119
Residential	9	Residential Virtual Energy Audit	RVAU	2039	0	1,887	719,216	25,770,751	431,530	15,462,450	199	119
Residential	9	Residential Virtual Energy Audit	RVAU	2040	0	1,887	719,211	26,489,962	431,527	15,893,977	199	119
Residential	9	Residential Virtual Energy Audit	RVAU	2041	0	1,887	719,216	27,209,178	431,530	16,325,507	199	120
Residential	9	Residential Virtual Energy Audit	RVAU	2042	0	1,887	380,876	27,590,054	228,526	16,554,032	192	115
Residential	9	Residential Water Savings	RWEE	2022	62	62	13,984	13,984	12,585	12,585	30	27
Residential	9	Residential Water Savings	RWEE	2023	0	62	97,694	111,678	87,925	100,510	31	28
Residential	9	Residential Water Savings	RWEE	2024	0	62	97,694	209,371	87,924	188,434	31	28
Residential	9	Residential Water Savings	RWEE	2025	0	62	97,694	307,065	87,925	276,359	31	28
Residential	9	Residential Water Savings	RWEE	2026	0	62	97,694	404,759	87,925	364,283	31	28
Residential	9	Residential Water Savings	RWEE	2027	0	62	97,694	502,454	87,925	452,208	31	28
Residential	9	Residential Water Savings	RWEE	2028	0	62	97,694	600,148	87,925	540,133	31	28
Residential	9	Residential Water Savings	RWEE	2029	0	62	97,694	697,841	87,924	628,057	31	28
Residential	9	Residential Water Savings	RWEE	2030	0	62	97,694	795,535	87,925	715,982	31	28
Residential	9	Residential Water Savings	RWEE	2031	0	62	97,694	893,229	87,925	803,906	31	28
Residential	9	Residential Water Savings	RWEE	2032	0	62	91,733	984,962	82,560	886,466	31	28
Residential	9	Residential Water Savings	RWEE	2033	0	42	59,652	1,044,614	53,686	940,152	17	15
Residential	9	Residential Water Savings	RWEE	2034	0	42	59,652	1,104,265	53,686	993,839	17	15
Residential	9	Residential Water Savings	RWEE	2035	0	42	51,881	1,156,147	46,693	1,040,532	17	15
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2021	315	315	821,633	821,633	718,412	718,412	423	370
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2022	599	914	5,677,378	6,499,010	4,976,669	5,695,082	1,598	1,414
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2023	0	914	8,022,393	14,521,403	7,035,246	12,730,328	1,991	1,766
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2024	0	914	8,022,371	22,543,774	7,035,227	19,765,555	1,989	1,764
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2025	0	914	8,022,393	30,566,167	7,035,247	26,800,802	1,989	1,764
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2026	0	914	7,975,846	38,542,013	6,991,958	33,792,760	1,979	1,754
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2027	0	863	7,765,705	46,307,718	6,796,525	40,589,286	1,835	1,619
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2028	0	726	7,648,919	53,956,637	6,687,916	47,277,202	1,735	1,526
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2029	0	726	7,648,898	61,605,535	6,687,897	53,965,099	1,732	1,523
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2030	0	726	7,647,844	69,253,379	6,686,916	60,652,015	1,732	1,523
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2031	0	724	7,202,342	76,455,721	6,297,985	66,950,000	1,730	1,521
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2032	0	659	3,263,345	79,719,067	2,862,356	69,812,356	1,189	1,038
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2033	0	536	329,438	80,048,505	304,468	70,116,823	260	241
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2034	0	522	296,961	80,345,465	276,173	70,392,997	259	240
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2035	0	522	296,961	80,642,426	276,173	70,669,170	258	240



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					VA							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2036	0	519	291,958	76,106,473	271,521	66,724,763	254	236
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2037	0	519	291,958	76,398,431	271,521	66,996,284	254	236
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2038	0	519	291,958	76,690,389	271,521	67,267,805	255	237
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2039	0	519	273,449	76,963,838	254,308	67,522,113	246	229
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2040	0	303	80,457	77,044,295	74,825	67,596,938	67	62
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2016	67	67	54,141	54,141	50,351	50,351	79	74
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2017	937	1,004	7,292,629	7,346,770	6,782,145	6,832,496	3,766	3,503
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2018	510	1,514	24,192,530	31,539,300	22,499,053	29,331,549	7,878	7,326
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2019	503	2,017	37,394,466	68,933,766	34,776,853	64,108,402	10,985	10,216
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2020	327	2,344	47,162,345	116,096,111	43,860,981	107,969,384	13,423	12,484
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2021	68	2,412	52,776,930	168,873,042	49,082,545	157,051,929	14,877	13,835
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2022	0	2,412	52,909,699	221,782,741	49,206,020	206,257,949	14,876	13,835
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2023	0	2,412	52,909,699	274,692,440	49,206,020	255,463,969	14,841	13,802
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2024	0	2,412	52,909,572	327,602,012	49,205,902	304,669,871	14,799	13,763
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2025	0	2,412	52,909,704	380,511,715	49,206,025	353,875,895	14,809	13,772
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2026	0	2,412	52,909,713	433,421,428	49,206,033	403,081,928	14,809	13,772
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2027	0	2,412	52,909,835	486,331,263	49,206,147	452,288,075	14,877	13,835
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2028	0	2,412	52,909,697	539,240,960	49,206,018	501,494,093	14,864	13,823
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2029	0	2,412	52,909,571	592,150,531	49,205,901	550,699,994	14,808	13,772
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2030	0	2,412	52,857,337	645,007,868	49,157,323	599,857,317	14,810	13,773
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2031	0	2,339	45,674,104	690,681,972	42,476,917	642,334,234	14,090	13,104
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2032	0	1,507	28,771,948	719,453,920	26,757,912	669,092,146	10,209	9,494
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2033	0	971	15,553,118	735,007,038	14,464,400	683,556,545	5,865	5,454
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2034	0	442	5,796,923	740,803,961	5,391,138	688,947,684	2,654	2,468
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2035	0	43	146,877	740,950,838	136,595	689,084,279	481	447



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions				NC								
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2036	0	3	5,003	4,832,914	4,652	4,220,580	4	4
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2037	0	3	5,003	4,837,916	4,652	4,225,233	4	4
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2038	0	3	5,003	4,842,919	4,652	4,229,885	4	4
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2039	0	3	4,743	4,847,662	4,411	4,234,296	4	4
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2040	0	0	55	4,847,717	51	4,234,347	0	0
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2016	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2017	7	7	34,487	34,487	32,073	32,073	44	41
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2018	36	43	615,615	650,102	572,522	604,594	323	301
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2019	27	70	1,581,000	2,231,101	1,470,330	2,074,924	504	469
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2020	17	87	2,155,304	4,386,405	2,004,433	4,079,357	645	600
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2021	7	94	2,432,591	6,818,996	2,262,309	6,341,666	712	662
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2022	0	94	2,449,493	9,268,489	2,278,028	8,619,695	712	662
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2023	0	94	2,449,494	11,717,983	2,278,029	10,897,724	710	660
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2024	0	94	2,449,213	14,167,196	2,277,768	13,175,492	708	658
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2025	0	94	2,449,493	16,616,689	2,278,028	15,453,521	708	659
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2026	0	94	2,449,493	19,066,182	2,278,029	17,731,549	708	659
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2027	0	94	2,449,773	21,515,955	2,278,289	20,009,838	712	662
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2028	0	94	2,449,493	23,965,448	2,278,029	22,287,867	711	661
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2029	0	94	2,449,213	26,414,661	2,277,768	24,565,635	708	659
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2030	0	94	2,449,493	28,864,154	2,278,029	26,843,664	708	659
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2031	0	94	2,415,483	31,279,637	2,246,399	29,090,063	706	657
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2032	0	88	1,836,291	33,115,929	1,707,751	30,797,814	643	598
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2033	0	49	869,830	33,985,759	808,942	31,606,756	353	328
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2034	0	19	295,832	34,281,592	275,124	31,881,880	160	149
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2035	0	6	18,803	34,300,394	17,486	31,899,367	56	52



Appendix Q. Incremental and Cumulative Participation, Gross and Net Energy Savings, and Non-coincidental Gross Peak Demand Reductions					Total							
Sector	Phase	Program Name	Program	Year	Incremental New Participants	Cumulative Participants at Year-End with Persistent Savings	Persistent Annual Gross Energy Savings (kWh)	Cumulative Gross Energy Savings at Year-End (kWh)	Persistent Annual Net Energy Savings (kWh)	Cumulative Net Energy Savings at Year-End (kWh)	Non-coincidental Gross Peak Demand (kW) at Year-End	Non-coincidental Net Peak Demand Reduction at Year-End (kW)
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2036	0	522	296,961	80,939,386	276,173	70,945,343	259	241
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2037	0	522	296,961	81,236,347	276,173	71,221,517	258	240
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2038	0	522	296,961	81,533,308	276,173	71,497,690	260	242
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2039	0	522	278,192	81,811,500	258,719	71,756,409	251	233
Non-Residential	8	Non-Residential Small Business Improvement Enhanced	SBIZ	2040	0	303	80,512	81,892,012	74,876	71,831,285	67	62
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2016	67	67	54,141	54,141	50,351	50,351	79	74
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2017	944	1,011	7,327,116	7,381,257	6,814,218	6,864,569	3,811	3,544
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2018	546	1,557	24,808,145	32,189,402	23,071,575	29,936,144	8,201	7,627
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2019	530	2,087	38,975,465	71,164,867	36,247,183	66,183,327	11,490	10,685
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2020	344	2,431	49,317,650	120,482,517	45,865,414	112,048,741	14,068	13,083
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2021	75	2,506	55,209,521	175,692,038	51,344,855	163,393,595	15,588	14,497
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2022	0	2,506	55,359,192	231,051,230	51,484,049	214,877,644	15,588	14,497
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2023	0	2,506	55,359,193	286,410,423	51,484,049	266,361,693	15,551	14,463
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2024	0	2,506	55,358,785	341,769,208	51,483,670	317,845,363	15,507	14,422
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2025	0	2,506	55,359,197	397,128,404	51,484,053	369,329,416	15,517	14,431
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2026	0	2,506	55,359,206	452,487,610	51,484,062	420,813,477	15,517	14,431
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2027	0	2,506	55,359,608	507,847,218	51,484,436	472,297,913	15,588	14,497
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2028	0	2,506	55,359,190	563,206,408	51,484,047	523,781,960	15,575	14,485
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2029	0	2,506	55,358,784	618,565,192	51,483,669	575,265,629	15,517	14,431
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2030	0	2,506	55,306,830	673,872,022	51,435,352	626,700,981	15,518	14,432
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2031	0	2,433	48,089,587	721,961,609	44,723,316	671,424,297	14,796	13,761
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2032	0	1,595	30,608,240	752,569,849	28,465,663	699,889,960	10,852	10,092
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2033	0	1,020	16,422,948	768,992,797	15,273,342	715,163,302	6,218	5,782
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2034	0	461	6,092,755	775,085,553	5,666,262	720,829,564	2,814	2,617
Non-Residential	5	Non-Residential Small Business Improvement	SBIP	2035	0	49	165,679	775,251,232	154,082	720,983,645	538	500