2021

SAVINGS CLAIM SUMMARY

APRIL 1, 2022

20 WINOOSKI FALLS WAY, 5th FLOOR
WINOOSKI, VERMONT 05404
888-921-5990

WWW.EFFICIENCYVERMONT.COM

Pursuant to the June 23, 2021 *Order of Appointment for Vermont Energy Investment Corporation (*Section III.10.A) and *Process and Administration of an Energy Efficiency Utility Order of Appointment* (Appendix B.3), Efficiency Vermont submits its *2021 Savings Claim Summary Report* to the Vermont Public Utility Commission (Commission) and the Vermont Department of Public Service (Department) in fulfillment of its energy efficiency utility (EEU) annual reporting requirements.

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1. OVERVIEW

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ABOUT EFFICIENCY VERMONT

Efficiency Vermont operates on a three-year budget cycle with specific state-mandated performance goals linked to compensation. Efficiency Vermont was created by the Commission and the Vermont Legislature in 2000 as a statewide, third-party, objective resource for the public good. Since its inception, Efficiency Vermont has been administered by VEIC, which currently holds an appointment from the Commission to administer Efficiency Vermont through the end of 2026.

2021 SUMMARY

In 2021, the first year of the three-year performance period (2021–2023), Efficiency Vermont was privileged to help more than 42,000 Vermonters with objective guidance to improve the affordability and comfort of their homes, businesses, institutions, and communities with energy efficiency. In 2021, Efficiency Vermont continued to experience challenges due to the COVID-19 pandemic and economic downturn. Efficiency Vermont doubled down on its support to help customers, especially the most vulnerable, save money in the near term with as little out-of-pocket expense as possible. Together, Vermonters will save more than $179 million over the lifetime of the 2021 investments[1] in efficient equipment and buildings.

These benefits are the result of a statewide effort. While Efficiency Vermont worked with Vermonters in every county, it also supported and grew the Efficiency Excellence Network (EEN) (the statewide network of installers, designers, builders, architects, and electric vehicle [EV] auto dealers, trained to deliver the highest-quality efficient technologies and services). With these partners—who provide a growing number of green jobs—Efficiency Vermont worked hard to ensure that all Vermonters have local access to affordable, top-quality efficient goods and services.

As Vermont's energy sector changes rapidly, the critical role of effective partnerships in delivering value has emerged in every aspect of Efficiency Vermont's work. Efficiency Vermont partnered with distribution utilities, state agencies, weatherization agencies, clean energy advocates, retailers, and contractors to ensure a positive customer experience in the delivery of comprehensive energy services that lower customers' energy burden, including new Flexible Load Management (FLM) and refrigerant management programs intended to lower both energy costs and greenhouse gas (GHG) emissions, while helping the state achieve its clean energy and climate goals.

[1] 2021 investments factored into the lifetime savings calculation include the following costs: a) Efficiency Vermont costs: $49,955,058 (includes Resource Acquisition, Development and Support Services, and Performance Award costs); b) Customer costs: $37,263,923; and 3) Department of Public Service evaluation and other costs, $2,413,519.

2021 SAVINGS

Efficiency Vermont's 2021 spending results and preliminary savings results towards its 100% goals, as provided in this report, are relative to its 2021 budgets and 2021-2023 Quantitative Performance Indicators (QPIs) and Minimum Performance Requirements (MPRs) issued by the Commission.[2] After 33% of the three-year performance period expired through 2021, Efficiency Vermont achieved preliminary savings results of 27% of its three-year 100% megawatt hours (MWh) goal and 40% of its three-year 100% Thermal Energy and Process Fuels (TEPF) million British thermal units (MMBtu) goal.[3] Electric QPIs #1 through #6 were between 27% and 33% achievement of the 100% goal, with an average of 29%; and TEPF QPIs #1 and #4 achieved 40% and 37%, respectively, of the 100% goal.

Figure 1 illustrates Efficiency Vermont's 2021 preliminary savings results toward its 100% energy-related QPI goals.

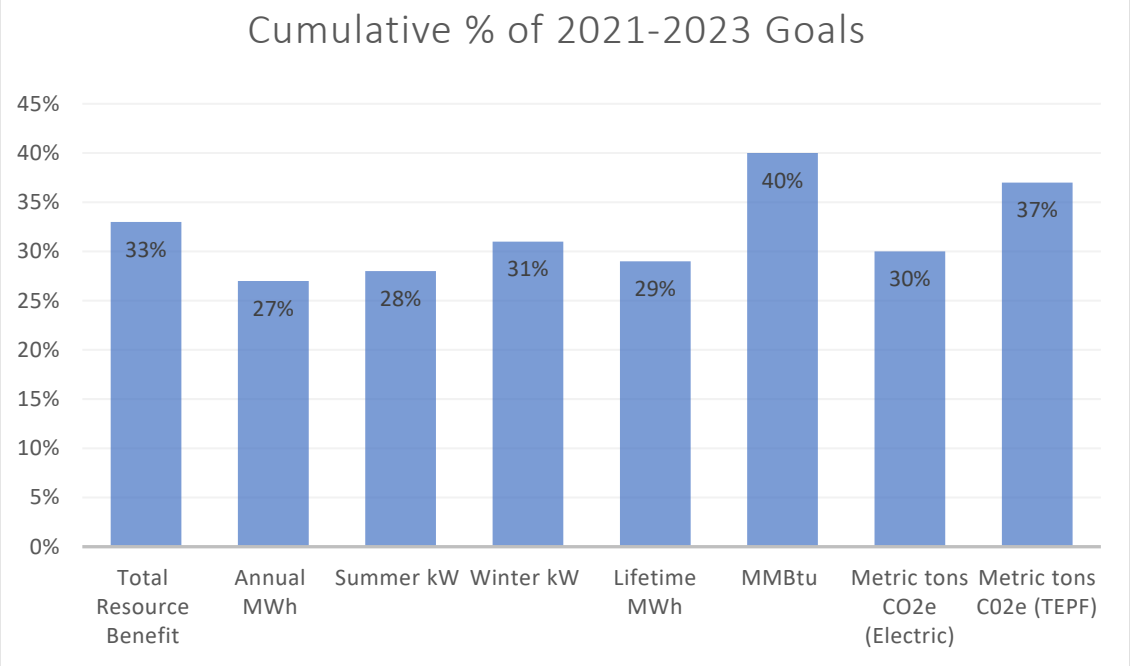

Figure 1. Efficiency Vermont's 2021 preliminary savings results toward its 100% energy-related QPI goals.

ELECTRIC EFFICIENCY

In 2021, Efficiency Vermont generated savings of 71,523 MWh, or 27% of the 100% MWh QPI goal. In 2021, Efficiency Vermont spending was $37,326,933[4] or 92% of the electric

[2] Efficiency Vermont's approved 2021 budget and 2021-2023 QPIs were issued by the Commission in Case No. 19-3272-PET: *Order Approving Revised Demand Resources Plan for Efficiency Vermont*, May 27, 2021; and Order Approving Compliance Filing of Efficiency Vermont's Performance Targets for 2021-2023 Performance Period, September 20, 2021.

[3] The electric efficiency results were achieved without any contributions toward QPIs from the Energy Savings Account pilot, which accounted for 4.9% of the 2021 electric RA budget.

[4] Excludes the operations fee.

resource acquisition (RA) budget for the year.[5] The vast majority of 2021 MWh savings came from investments in two major markets: the business existing facilities market with 39,716 MWh, or 56% of total electric MWh savings for the year; and the residential efficient products market with 24,066 MWh, or 34% of total electric MWh savings for the year.

Figure 2 shows 2021 electric RA spending by major market.[6] Figure 3 shows 2021 MWh savings by major market. (See Sections 2-4 for RA program highlights, and Section 5 for Development and Support Services [DSS] program highlights.)

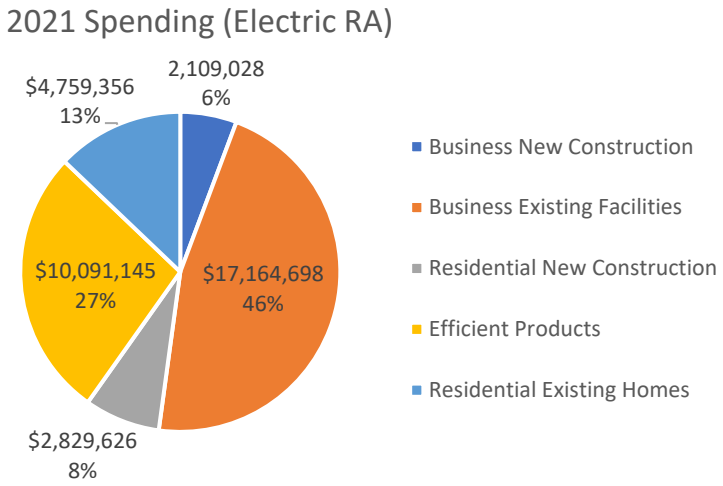

Figure 2. 2021 electric RA spending by major market

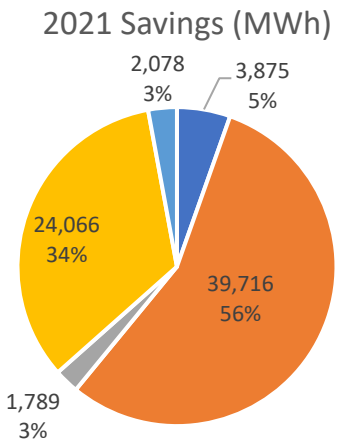

Figure 3. 2021 electric savings (MWh) by major market

Thermal Energy and Process Fuels Efficiency

Through 2021, Efficiency Vermont generated savings of 136,306 MMBtu, or 40% of the MMBtu target. In 2021, Efficiency Vermont spending was $7,002,415[7] or 99.7% of the TEPF RA budget. 2021 MMBtu savings came from RA investments in three major markets: the business existing facilities market with 49,596 MMBtu, or 36% of total TEPF MMBtu savings; efficient products with 65,426 MMBtu, or 48%; and existing homes with 21,284 MMBtu, or 16%. Figure 4[8] shows 2021 TEPF major market RA spending. Figure 5 shows 2021 TEPF major market MMBtu savings. (See Section 2-4 for RA program highlights, and Section 5 for DSS program highlights.)

[5] For more information on Efficiency Vermont's 2021 spending results, please see Efficiency Vermont's 2021 Budget Variance Report filed on March 23, 2022, in Case No. 22A-0616.
[6] The spending values reported in Figure 2 exclude the operations fee. ESA spending is not included.
[7] Excludes operations fee.
[8] The spending values reported in Figure 4 exclude the operations fee.

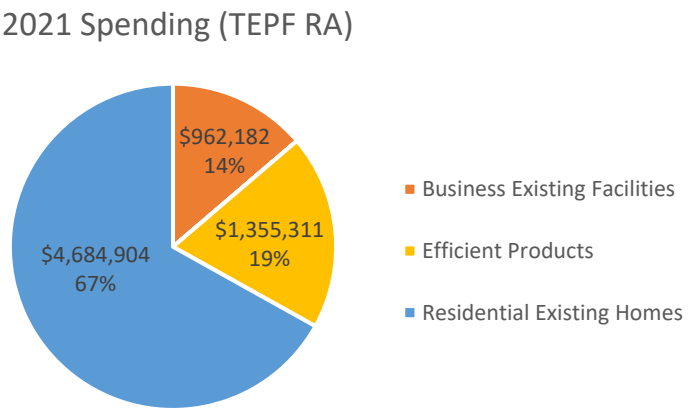

Figure 4. 2020 TEPF RA spending by major market

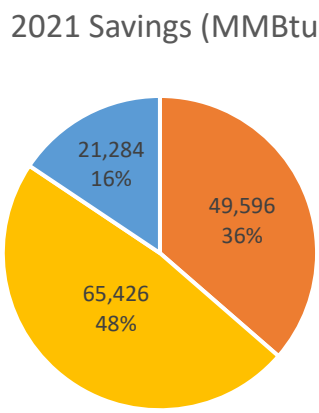

Figure 5. 2020 TEPF savings (MMBtu) by major market

SECTIONS 2 - 5. 2021 SERVICES

2021 SERVICES

Efficiency Vermont designed and delivered objective, customer-focused technical, financial, and educational services to help Vermonters overcome barriers to improving the energy efficiency of their homes, businesses, institutions, municipal facilities, and transportation choices.

2. SERVICES FOR BUSINESS CUSTOMERS

2.1 BUSINESS EXISTING FACILITIES

This category includes commercial, industrial, institutional, and municipal facilities. Efficiency Vermont provided electric and TEPF prescriptive rebates across a range of technologies for lighting; heating, ventilation, and air conditioning (HVAC); and refrigeration equipment. In addition, Efficiency Vermont offered customized efficiency incentives and financing to help business owners purchase and install specialized energy-saving equipment, and technical support for high-performance operations that match their unique needs. Business services were tailored for businesses of all sizes and market sectors in Vermont. (See Section 2.3 for information about crosscutting services for both business existing facilities and business new construction.)

2.1.1 ENERGY SAVINGS ACCOUNT (ESA) PILOT

In 2021, Efficiency Vermont provided support for project screening, Energy Management Plan (EMP) review, and reimbursements for participants (see Section 2.3.3 for ESA pilot activities with ski areas).[9] Three of the nine ESA pilot participants had submitted EMPs by the end of 2021. Additionally, Efficiency Vermont provided annual reporting templates to all ESA participants for their updates to the annual ESA progress report. Participants reported delays in developing efficiency projects due to disruptions from COVID-19.

2.2 BUSINESS NEW CONSTRUCTION

Efficiency Vermont's support for the creation of efficient new buildings continued to focus primarily on architects, engineers, specialty design service providers, construction tradespeople, equipment suppliers, installation contractors, commissioning agents, appraisers, lenders, developers, and real estate agents. Efficiency Vermont also worked with building owners who were key members of teams undertaking construction projects by institutions, government agencies, and large businesses with multiple buildings. Although 2021 began with a robust pipeline, many projects experienced delays in both contractor availability and supplies due to COVID-19 impacts. In response to these market conditions, Efficiency Vermont provided customers with advanced incentives to secure materials and technical assistance; however, new construction projects generally have a 12-month lead

[9] ESA Pilot participants file EMPs with the Commission. Upon Commission approval of the EMP, a participant will receive a reimbursement for their energy efficiency projects.

time so closing new projects within the year proved challenging. 35 projects were terminated and at least seven delayed until 2022. Ultimately, Efficiency Vermont completed 59 building projects, including two high-performance projects and four net-zero-ready projects. Additionally, Efficiency Vermont provided energy efficiency training and information to professionals and tradespeople involved in new construction and renovation projects through the EEN, Energy Code Assistance Center, and Better Buildings By Design (BBD) conference (see sections 4.3, 5.1.1 and 5.1.4), and through video-based training on Efficiency Vermont's website. (For information about crosscutting services for both business new construction and existing facilities, see Section 2.3.)

2.3 Crosscutting Services for Existing Facilities and New Construction

2.3.1 Vermont's Largest Energy Users

Efficiency Vermont supported approximately 205 large businesses who typically use more than 1,000 MWh of electricity per year. Efficiency Vermont continued to take a customized approach. Designated Efficiency Vermont staff maintained long-term proactive professional relationships with individual businesses. To design and deliver effective, customized services, Efficiency Vermont maintained a deep understanding of each company's priorities and challenges. Additionally, Efficiency Vermont increased its engagement with the supply chain to help address the unique hurdles facing our largest customers. Efforts to reduce energy use and costs in this sector are detailed below.

Efficiency Vermont:

- Launched a custom HVAC controls program, including an incentive to integrate HVAC systems with lighting or other building systems (see section 4.1 for Efficiency Vermont's collaboration with utility partners on this initiative).
- Partnered with Vermont's 12 regional development corporations (RDCs) to provide enhanced incentives that would cover 90% of electrical efficiency projects, up to $40,000.
- Assisted customers in identifying savings for variable frequency drives (VFDs), compressed air and controls projects, including assistance sourcing products and labor to expedite project completion.
- Proactively reviewed customers' energy usage, identified 15 customers whose energy use had increased in 2021, and conducted outreach with those customers.
- Completed analyses for two Continuous Energy Improvement cohorts: wastewater treatment facilities (WWTFs); and colleges. Efficiency Vermont calculated estimated energy savings for the WWTF cohort and customers indicated satisfaction with the program.

2.3.2 Small and Medium-Sized Businesses

Efficiency Vermont designed and implemented services addressing the needs of Vermont businesses that typically use up to 1,000 MWh per year and that are not served under Efficiency Vermont's targeted markets initiatives (see Targeted Markets in Section 2.3.3). Efficiency Vermont engaged with nearly 500 businesses, including 213 on-site business energy walk-throughs, to assist customers in identifying efficiency opportunities and help

them leverage Efficiency Vermont's rebates and services. Additionally, Efficiency Vermont:

- Modified the Building Performance rebate offer to 50% of project costs, up to $3,000
- Launched a $200 bonus offer for businesses located in Targeted Communities for cold climate heat pumps (CCHPs), heat pump water heaters (HPWHs), and commercial kitchen equipment. (For more information on Targeted Communities, see Section 4.4.)

2.3.3 Targeted Markets

Efficiency Vermont continued to implement targeted initiatives—each with its own approaches, energy-saving measures, and incentives—to address the priorities, challenges, and motivations of specific markets. These markets were agriculture, commercial kitchen equipment, hospitals and healthcare, K–12 schools, municipalities, ski areas, and state buildings. Activities in selected targeted markets follow.

Agriculture

Controlled Environment Agriculture (or "Indoor Agriculture")

Efficiency Vermont:

- Provided various levels of assistance from code assistance to providing equipment recommendations; and partnered with the Vermont Sustainable Jobs Fund to advertise efficiency services, including energy consultations.
- Offered new incentives for high-efficiency cooling units, and completed 8 projects for measures including greenhouse coverings, wood heat conversion, ventilation fans, and grow lights.
- Tested and deployed a new energy savings modeling tool.
- In partnership with Resource Innovation Institute, facilitated a dehumidification workshop.

Cannabis Growing

Efficiency Vermont:

- Created a webpage (https://www.efficiencyvermont.com/rebates/list/indoor-growing-equipment) to supplement the established greenhouse growing page (https://www.efficiencyvermont.com/products-technologies/agricultural-equipment/greenhouse-equipment).
- Provided technical expertise and recommendations to the Commission, Department and Cannabis Control Board in the creation of energy codes for cannabis growing, including HVAC, lighting, and envelope standards for cannabis growing facilities. Also, assisted the Vermont Agency of Agriculture on a blog post regarding hemp drying.
- Performed modeling for mechanical and lighting equipment energy savings in multiple customers' buildings, including a review of three light-emitting diode (LED) lighting fixtures for energy usage. This allows the customer to focus on testing the fixtures for propagation performance and yield results.

Additionally, Efficiency Vermont incentivized 15 efficient maple sap vacuum pumps and 13 reverse osmosis upgrades for Vermont sugar makers. For Vermont's dairy industry, Efficiency Vermont continued to incentivize plate coolers, milk pump VFDs, heat recovery

units and ventilation: 20 projects were completed at dairy farms.

Commercial Kitchen Equipment

Efficiency Vermont partnered with participating distributors to provide midstream incentives for the purchase of efficient commercial kitchen equipment. The uptake of electric measures was dominated by refrigerators and freezers, followed by dishwashers; for TEPF measures, it was dominated by fryers, followed by convection ovens.

Hospitals and Healthcare

Efficiency Vermont:

- Completed a pipe insulation project at a hospital and worked with four medical facilities on a variety of control upgrades.
- Presented at the New England Healthcare Engineers Society conference, sharing its experience with COVID-19 mitigation measures; and discussed strategies for airflow control, advanced controls in long-term solutions, and new guidelines for emergency conditions, and value engineering as part of planning processes.

K–12 Schools

Efficiency Vermont provided incentives for high-performance pumps, kitchen hood exhaust controls, lighting improvements, and other efficiency measures; and presented to 100-plus facilities managers at the Vermont School Custodians and Maintenance Association's annual meeting on the topic of energy efficiency with a focus on HVAC optimization.

Municipalities (including WWTF)

Efficiency Vermont:

- Assisted in the investigation of opportunities to greater utilize excess heat from anaerobic digesters that are being planned by WWTFs.
- Identified several energy WWTF efficiency projects, including rainwater and snowmelt infiltration reduction for manholes (to avoid treating groundwater thereby reducing electrical usage); VFD installation; replacing fossil fuel heating with heat pumps; dehumidification strategies; and weatherization initiatives.

Ski Areas

Efficiency Vermont engaged in an ongoing partnership with the Vermont Ski Areas Association, and provided ongoing project development and support to most Vermont ski areas, including:

- Provided technical and financial support for snowmaking equipment, including low-energy snow guns and fan guns, and pilot projects for replacement nozzles and nucleators and snow gun automation.
- Provided technical, submetering, and financial support for ski area building retro-commissioning.
- Reviewed applications from several ski areas for the enhanced incentive offer in partnership with RDCs for COVID-19-affected businesses (see section 2.3.1 for more information). Several awards were made.
- In the ESA pilot, provided ski area assistance (both screening measures and EMP development) as a contractual service (see ESA pilot in section 2.1.1).

- Published a Vermont ski area success story on YouTube: https://youtu.be/4SLAVRjtVwY.

State Buildings

Many projects were delayed due to both COVID-19 impacts, as well as a reduction and certain limitations with respect to State revolving loan funds utilized for State building projects. The State Energy Management Program (SEMP) team, which is comprised of Vermont Department of Buildings and General Services employees, was also short staffed. As a result of these circumstances, Efficiency Vermont and the SEMP team focused on project pipeline development, identifying opportunities to streamline project implementation processes, and how to address the aforementioned barriers. Additionally, Efficiency Vermont provided a lighting and controls training to the SEMP team, and facilitated the enrollment of three State building complexes to participate in the Green Mountain Power (GMP) FLM pilot; and implemented the FLM HVAC controls sequence of operations at these buildings.

2.3.4 Key Commercial Technologies

Efficiency Vermont promoted awareness of efficient technologies and engaged in the following efforts to bring these benefits to the state's commercial sector (also, see Section 4.7 for HVAC and Refrigeration).

Combined Heat and Power

For customers who are either considering, planning or already have anaerobic digester systems, Efficiency Vermont investigated opportunities for the greater utilization of excess heat from these systems.

Commercial Lighting

Efficiency Vermont increased rebates for various measures and launched an enhanced incentive program for selected custom lighting projects in response to challenging market conditions related to COVID-19. Additionally, Efficiency Vermont:

- Transitioned the commercial lighting program to the new DesignLights Consortium® lighting specification, which increased energy efficiency and introduced quality of light requirements, including spectral quality and glare, as well as new controllability requirements.
- Finalized a large custom project in partnership with GMP which upgraded over 1,200 street and security lights to LED lights.

Industrial Process Equipment

Efficiency Vermont evaluated its compressed air leak audit and repair program to assess its impact on the market and improvements to the program. Based on the evaluation, Efficiency Vermont implemented an audit incentive cap, and revised customer informational materials, to increase program adoption.

3. SERVICES FOR RESIDENTIAL CUSTOMERS

3.1 EXISTING HOMES

3.1.1 EXISTING LOW-INCOME HOMES

Efficiency Vermont undertook its efforts in service to low-income households in collaboration with the following long-standing partners: low-income housing and service providers, including agencies of Vermont's weatherization program, and 3E Thermal; affordable housing funders, including the Vermont Housing & Conservation Board (VHCB) and the Vermont Housing Finance Agency (VHFA); and multifamily housing developers, including Housing Vermont. In 2021, Efficiency Vermont engaged in the activities described below, as well as those described in Section 3.2.1 for new low-income homes.

Single-Family

Efficiency Vermont introduced significantly revised and diversified offers to income-eligible households, to improve the average project cost across the portfolio of offers, while maintaining its impact on Vermonters served. In doing so, the low-income program doubled the quantity of offers available, which are all designed to better meet customers' needs depending on their annual electric usage and household energy burden. Offers included:

- Through one-on-one phone calls, qualified 685 customers for Efficiency Vermont's four primary low-income programs for residential customers: 222 customers for Targeted High Use (THU); 218 customers for THU Lite; 65 customers for the appliance replacement voucher program (see Section 4.7.1); and 180 customers for the low-income energy savings kit program.
- Maintained the popular and effective THU program, which provides a comprehensive suite of electrical efficiency improvements to eligible households in partnership with the state's Weatherization Assistance Program agencies. THU is designed for customers with high electric use and a high electrical energy burden.
- Added an equally comprehensive offer, THU Lite, that allows customers to select one eligible equipment replacement in addition to receiving efficient lighting and water conservation measures. THU Lite is designed for customers with high electric use and a low electrical energy burden.
- Repeated the popular appliance replacement voucher program, this time with a maximum $700 value. Customers could redeem their voucher for a qualifying appliance at participating retailers. This program was designed for customers with lower electric use and a high electrical energy burden.
- Offered energy savings kits for customers with low electric use and a low electrical energy burden.
- Finalized the Energy Efficiency, Health, and Climate Adaptation grant with the Vermont Department of Health. The grant funds offset non-incentive costs in programs for low-income customers who reduced energy expenditures while improving health and climate adaptation.

Multifamily

Efficiency Vermont:

- Launched a free products program for rental properties in the Targeted / Tailored Communities (see Targeted / Tailored Communities in Section 4.4), which increased its direct-to-customer offerings for renters via an online storefront. This enabled customers to order efficient products at no charge, such as screw-based LEDs, faucet aerators, and showerheads (available to renters and property owners), as well as pipe wrap and LED downlights (available to property owners only). Efficiency Vermont also created a separate version of the online platform with more extensive product options for property owners.
- Completed a weatherization project for a homeless shelter that dramatically reduced its fossil fuel heating usage.

3.1.2 Existing Market-Rate Homes

Single-Family

Efficiency Vermont:

- Processed 898 Home Performance with ENERGY STAR® projects, 464 or 52% of which were for moderate-income customers. Launched a Home Performance with ENERGY STAR "pre-approval" system using the Online Rebate Center by which contractors could report projects ahead of completion to reserve rebates for a period of three months. This new system created greater transparency for customers, contractors, and Efficiency Vermont. Offered statewide access to virtual home energy visits: conducted 335 of such visits in 2021.
- Saw increased interest in the retail do-it-yourself (DIY) program: a total of 407 DIY projects were submitted or processed in 2021.

3.2 Residential New Construction

3.2.1 New Low-Income Homes

Single-Family

Efficiency Vermont:

- Supported the design and construction of eight zero energy modular (ZEM) units for affordable housing partner organizations assisting homeless Vermonters. Homes were built in conjunction with federal stimulus funds. Efficiency Vermont has been working with a ZEM manufacturer for several years to help modify the manufacturing process to build high-performing homes to order.
- Worked with Housing Foundation Inc. (HFI), VHCB, and the National Renewable Energy Laboratory on retrofitting seven VHCB-funded ENERGY STAR U.S. Housing and Urban Development manufactured homes to meet Vermont's residential building energy standards. These homes are planned to be installed as housing for families experiencing homelessness in three HFI mobile home parks.
- Worked on the design of 20 units of affordable ZEM housing in central Vermont, along with completing a feasibility study of the direct current microgrid aspect of the project.

- Worked with farm worker housing stakeholders to develop a pilot program involving repair, and new construction, for manufactured housing on farms.
- Completed 25 Efficiency Vermont 2.0 low-income single-family homes.

Multifamily

Efficiency Vermont:

- Provided technical assistance to a housing authority on a "bridge housing" (a.k.a. "transitional housing") project for homeless individuals. The project was fully funded through the federal Coronavirus Aid, Relief, and Economic Security Act.
- Broke ground on a lodging facility to be gutted and converted into 30-day units for unhoused people.
- Helped a Housing Trust achieve significantly lower air leakage rates in a 30-unit building located in a downtown area.
- Worked with partners on the design of a 36-unit affordable housing project to reduce the size of the hot water system, potentially reconfigure the system's return piping, and maximize the benefits of the smart circulator pumps.
- Assisted an organization on its commissioning of multiple projects, including evaluating whether mechanical systems installed were functioning as expected, and if any problems represented a performance or energy issue.
- Performed the final inspection of two buildings that achieved blower door test results of 0.05 CFM50 / exterior surface area. This level is the Passive House standard, and Efficiency Vermont's program requires only 0.1 CFM50 / exterior surface area. Achieving this low blower door test reading required extreme attention to detail in the design and build phases of the project, in which Efficiency Vermont played a critical role.
- Helped conduct a mockup and installations of a technology new to the multifamily new-construction market: self-contained, electrically powered HVAC units. Post-installation analysis indicated the heating systems were running and meeting thermostat set points.
- Conducted a site-visit and provided feedback on the mechanical design of an emergency homeless housing project. As a result of Efficiency Vermont's technical assistance, the project will utilize CCHPs as the main heating and cooling source, with electric resistance heat for back-up in compliance with the residential building energy standards.
- In partnership with Evernorth, utilized a data acquisition system to review data on several completed projects that have central hot water distribution systems with circulation loops. Through this partnership and analysis, Efficiency Vermont calculated energy losses: for every BTu delivered to the tenant, the hot water distribution system must generate three BTus. This analysis informed the redesign of central hot water distribution systems with circulation loop for projects that were in the design phase.

3.2.2 New Market-Rate Homes

Single-Family

To encourage and incentivize best practices intended to result in healthy and comfortable homes that both exceed residential building energy standards and align with the State's goal of a net zero residential building energy standard by 2030, Efficiency Vermont provided ongoing technical support and educational materials to homeowners and professionals engaged in the design and construction of new homes in Vermont. In 2021, Efficiency Vermont made plans (to be implemented in 2022) for new programming that will more directly support builders and developers in delivering newly constructed, high-performing homes that are healthy, comfortable, and net zero ready (for more information, see Efficiency Vermont's 2022 Update to the 2021-2023 Triennial Plan, Section 3.3/Residential New Construction at https://www.efficiencyvermont.com/about/annual-plans-reports).

Additionally, Efficiency Vermont:

- Completed 129 Efficiency Vermont Certified 2.0 homes (an increase of 54% since 2019, pre-COVID-19), and 31 High Performance homes.
- Contracted with third-party raters to provide Home Energy Rating System ratings to a subset of program participants, which was part of a larger effort to build market interest in evolving products and services.

Multifamily

Efficiency Vermont:

- Established an agreement with Vermont Gas Systems (VGS) for coordination and support efforts with respect to incentive payments, technical assistance, and savings claims.
- Provided coaching and technical assistance regarding an insulated sheathing application which exceeded the efficiency criteria for the certified track on which one project was slated.

3.3 Retail Efficient Product Services

Efficiency Vermont's services were designed to increase availability and knowledge of quality efficient products and to reduce purchase costs to motivate Vermonters to select efficient models of products for their homes and businesses. Efficiency Vermont incentivized products that met or exceeded efficiency standards set by the U.S. Department of Energy's / Environmental Protection Agency's ENERGY STAR program, which included: HPWHs and clothes dryers, appliances (including refrigerators with natural refrigerants; see Section 4.7.1), smart thermostats, electronics and lighting (including indoor horticultural lighting and connected lighting). An essential element of these efforts continued to be services to retailers and to upstream partners in the product supply chain to ensure the availability of high-quality efficient products in Vermont stores, which included the following tactics: price reductions at the manufacturer and retail level, midstream sales incentives that influenced stocking practices, point-of-purchase information, advertising, an online marketplace scoring the energy efficiency of products to inform customer buying decisions, and

promotional and public information activities (also, see Section 4.3 for services to contractors and equipment suppliers). Additionally, Efficiency Vermont:

- Reduced incentives on ENERGY STAR Most Efficient air conditioners; however, market activity remained strong for the technology.
- Discontinued incentives on ENERGY STAR pool pumps due to new federal standards which set pool pump efficiency baseline to the existing ENERGY STAR level. Efficiency Vermont continued to provide customer education about efficient pool pumps.
- Launched a seasonal appliance recycling program for refrigerators, freezers, dehumidifiers, and window air conditioners.
- Launched a new statewide energy savings kit offer. Kits included a variety of LED bulbs and water-saving features. Efficiency Vermont promoted the energy savings kits on Front Porch Forum, Facebook, the *Watts New* newsletter, and through community partner participation.
- Continued to play a role in regional and national efforts regarding efficient product specification and emerging products of benefit to Vermont through its engagement with Northeast Energy Efficiency Partnerships (NEEP), the Consortium for Energy Efficiency (CEE), Attachments Energy Rating Council, and ENERGY STAR, and as a participant or lead on teams of the EPA's Retail Products Platform.

4. Activities in Service to All Major Markets

While serving specific markets (as described in previous sections), Efficiency Vermont also provided services with an impact on multiple sectors. A key priority for Efficiency Vermont is to serve any Vermonter, no matter their race, income level or geographic location. In 2021, Efficiency Vermont conducted a diversity, equity, and inclusion analysis of its program participation to better understand how to improve the accessibility of its offerings.[10] The analysis produced the following key learnings and takeaways:

- Customer-level demographic data is limited. Imperfect data can be misleading, but a focus on obtaining better data could delay or blunt needed action
- No clear geographic gaps exist in current program participation, indicating that at a town-wide level, towns characterized by a high number of BIPOC[11] or low-income residents, renters, or seniors are not under-served
- An even distribution of program participation across the state does not indicate equity in program participation

Recognizing barriers to saving energy are higher for many BIPOC and low-income Vermonters, in 2021 Efficiency Vermont adopted a plan to advance diversity, equity, and inclusion (DEI) in energy efficiency programming.[12] The plan will continue to evolve and grow as Efficiency Vermont learns from partners, customers, and communities. The current plan includes the following strategies:

[10] Efficiency Vermont blog: Why does diversity equity and inclusion matter when it comes to energy efficiency? August 5, 2021.
[11] Black, Indigenous, and people of color.
[12] Advancing Diversity, Equity, & Inclusion (DEI) in Vermont's Energy Efficiency Programs

- Embed a core focus on diversity, equity, and inclusion into all aspects of our programs to help Vermonters reduce their energy costs and burden
- Leverage our resources to support historically disenfranchised businesses, partners, and communities
- Actively engage in the broader state-level effort to advance equity through public policy, working collaboratively with our regulators and efficiency utility partners to center energy justice in our collective work
- Encourage all staff to participate in creating a work environment that values diverse viewpoints, cultures, and lived experiences; and fosters compassionate, open, and honest dialogue while supporting continuous improvement

Also, a key element of its cross-sector approach was Efficiency Vermont's ongoing support for the businesses that Vermonters turn to for efficient products and services. These partnerships enabled Vermont homes and businesses to have access to a valuable network of knowledgeable providers while strengthening these providers' businesses. Although not always evident to the general public, these partnerships have a profound impact on all Vermonters' ability to lower energy use in their homes and places of business. Efforts made with these providers included workforce development training, coordinated planning, information exchange, quality assurance, financial incentives, and promotional activities. In addition to the activities outlined in this section, efforts made alongside partners in various initiatives appear in other sections throughout this report. Included in this section are also the results of Efficiency Vermont's annual "Energy Pulse" survey (see Section 4.11).

4.1 COORDINATION WITH UTILITY PARTNERS

Efficiency Vermont participated in a number of broad partnership efforts with distribution utilities. It also convened monthly "Utility Working Group" meetings to share technology, program, and customer insights, while ensuring continuous improvement in program coordination and collaboration. Specific partnership activities are discussed below.

Tier III[13] and efficiency programs collaboration

Efficiency Vermont:

- In collaboration with utility partners, integrated all electric distribution utilities into the midstream heat pump program administered by Efficiency Vermont, which resulted in a larger discount, for a wider range of heat pumps, universally available to all Vermont ratepayers (see section 4.7 for details).
- In collaboration with utility partners, launched an integrated controls pilot for ductless CCHPs, in order to both improve heat pump performance, and to reduce fossil fuel usage from central heating systems (the electric distribution utilities claimed 100% of the fossil fuel savings).

[13] In 2015, a renewable energy standard (RES) became law in Vermont. The law establishes three categories of required resources to meet the requirements of the RES: 1) total renewable energy, 2) distributed renewable generation, and 3) energy transformation. The third category, energy transformation (or "Tier III"), encourages Vermont retail electricity providers to support projects that reduce fossil fuel consumed by their customers and the emission of GHG attributable to that consumption.

- In collaboration with its utility partners, launched a ground source heat pump (GSHP) program (see section 4.7 for details). Efficiency Vermont convened utility partners to collaborate on GSHP savings, incentives, and program design.
- In response to a request from GMP, VEIC funded updates to Efficiency Vermont's tools and systems to allow Efficiency Vermont to administer GMP-specific rebates to customers participating in joint Efficiency Vermont / Tier III programs. This new capability enabled Efficiency Vermont to incorporate utility-specific rebates with Efficiency Vermont's statewide rebate payments made to distributors and customers. VEIC invested in these system upgrades to leverage system and organizational capabilities to support utility partners in Vermont, and with other divisions within VEIC. The costs to develop the infrastructure were not passed on to Vermont ratepayers through Efficiency Vermont.

In addition to its broad partnership efforts, Efficiency Vermont maintained direct engagement with each utility partner, individually, in order to deliver joint programs cohesively, create a seamless customer experience and increase savings opportunities for customers. Examples of these one-on-one partnership efforts include: Tailored Programs (see Section 4.4); joint support for large business customers; and aligning energy efficiency utility (EEU) rebates and communications.

Tariff-based loan
In coordination with VGS, VPPSA, and VHFA, Efficiency Vermont presented (and solicited statewide feedback and participation by Vermont distribution utilities) on the development of a program design that would enable weatherization projects to be financed on a customers' electric or natural gas bill. The tariff-based loan was also designed to allow qualified energy efficiency and Tier III electrification measures to be bundled with the weatherization project.

Act No. 151 Programs
Efficiency Vermont utilized an extensive stakeholder process to ensure its Act No. 151 proposal and programs were additive and complementary to, and will not replace or be in competition with, either the Tier III energy transformation projects implemented by electric distribution utilities in the statewide EEU service area, or programs or services offered by State agencies and departments (see section 4.9 for Efficiency Vermont's Act No. 151 programs).

Flexible Load Management
See Section 4.8 for Efficiency Vermont's collaboration with utility partners on expanding FLM efforts.

4.2 STATE, REGIONAL, AND NATIONAL PARTNERSHIPS

In service to Vermonters and in support of the State's energy goals, Efficiency Vermont continued to leverage the expertise and resources of entities engaged in a range of energy and efficiency endeavors, both in Vermont and outside the state. Efficiency Vermont shared its own expertise at regional and national gatherings, enabling Vermont to be both

recognized for its innovations and informed by best practices in other states. Efficiency Vermont's regional and national work has influenced the establishment of product specifications that ensure that Vermont consumers have access to the highest-quality, most energy-efficient products. In Vermont, partners included the Vermont Community Foundation, the VHCB, the Regulatory Assistance Project, and many others. On a regional and national level, Efficiency Vermont maintained ongoing partnerships with such organizations as NEEP, the New Buildings Institute, CEE, ENERGY STAR, and the American Council for an Energy-Efficient Economy (ACEEE), working to share information on best practices and to establish uniform product eligibility criteria and program designs.

4.3 Services to Contractors and Equipment Suppliers

4.3.1 The Efficiency Excellence Network

Efficiency Vermont:

- Provided 32 trainings to trade ally groups and made site visits to trade partners. At many trainings, Efficiency Vermont offered the ability for contractors to earn Building Performance Institute, and American Institute of Architects, continuing education credits to maintain respective licensures.
- In response to Utility Working Group recommendations to enable customers to more easily find contractors to install Electric Vehicle Supply Equipment (EVSE), expanded the electrical / lighting trade ally group to include EVSE installers; 17 EVSE installers were added.
- Launched two new EEN groups: a group for EV auto dealers (24 dealers enrolled); and a GSHP trade ally group. Auto dealers who joined the EEN were also listed on Efficiency Vermont's Find a Pro or Retailer Tool.
- Efficiency Vermont developed and conducted a training for participating GSHP contractors.
- Launched an additional HVAC service listing for ductless heat pump integrated controls.
- Held regular calls with Home Performance with ENERGY STAR contractors and heat pump contractors, to provide program updates, explore emerging technologies, and time for discussion in an informal peer learning environment.
- Signed midstream agreement updates with distributors and suppliers of lighting, HVAC equipment, woodstoves, and commercial kitchen equipment. This action enrolled distributors and suppliers in the EEN.
- In partnership with VGS, leveraged Efficiency Vermont's Find a Pro or Retailer tool to support service listings for natural gas–certified contractors.
- Registered 144 EEN members at the BBD conference. Seven sessions were presented by EEN members (see Section 5.1.4 for the BBD conference).

4.3.2 Trade Association Partnerships

In addition to engaging in direct customer interaction, Efficiency Vermont worked with professional and trade member organizations representing a wide range of constituents. By sharing targeted information through these trusted channels, Efficiency Vermont empowered businesses with knowledge about best practices and resources intended to help

strengthen their bottom line. Vehicles included association newsletters, websites, and technical materials, as well as event sponsorship, speaking engagements, conference and trade show participation, training workshops, and promotional and educational campaigns.

4.4 COMMUNITY-BASED ACTIVITIES

Throughout the state, Efficiency Vermont engaged with Vermonters in their communities in the following efforts to reduce energy use in their businesses, homes, institutions, and municipal facilities.

Targeted Communities
Efficiency Vermont:

- In collaboration with partners and after outreach to key stakeholders including municipal leaders, launched the Targeted Communities program. The 2021 Targeted Communities were the Mad River Valley (Duxbury, Fayston, Moretown, Waitsfield, Warren), Deerfield Valley (Dover, Wardsboro, Whitingham / Jacksonville, Wilmington), Barre City, and Island Pond.
- Provided 18 landlord consultations, 24 business walk-throughs, and 28 community events focusing on weatherization and EVs, which attracted over 320 attendees.
- Completed five projects with municipalities including lighting, refrigeration, and weatherization upgrades.
- Provided enhanced incentives for lighting, refrigeration, and weatherization upgrades to four non-profit business that provide health and well-being services.
- Developed new websites for each of the Targeted Communities and undertook social media promotion to increase awareness of offers available to residents.
- Sent a mailer to businesses in the Targeted Communities promoting a business bonus offer for heat pumps, HPWHs, and commercial kitchen equipment.

Tailored Programs
In partnership with Vermont Public Power Supply Authority (VPPSA), Efficiency Vermont launched the "Tailored Programs" for customers served by Barton, Ludlow, and Jacksonville electric departments respectively. This program was intended to meet the needs of individual municipal electric utilities, providing both residential and business customers served by these utilities, a suite of programs ranging from enhanced rebates and income-eligible services, to workshops and education on weatherization, heat pumps and EVs. Program design, planning and implementation involved input and support from VPPSA, municipal utilities and Efficiency Vermont. In collaboration with local groups, outreach and engagement included: information tables at local events and businesses, announcements and ads through local media, and direct engagement with targeted businesses. Bill inserts were also provided by electric departments. Specific offers included: a $200 appliance rebate coupon for the purchase of specific ENERGY STAR appliances, free energy savings kits, and special offers to promote weatherization (including a $2,000 weatherization plus CCHP bonus offer for Barton and Jacksonville customers). In collaboration with VPPSA and NeighborWorks HEAT Squad, Efficiency Vermont provided a weatherization workshop. These efforts resulted in 10 weatherization projects, 31 appliance coupons redeemed, 178 free energy savings kits, 11 low-income customers served, and over 80 businesses contacted

by phone or in person by our staff.

In addition to the Targeted and Tailored Communities work, Efficiency Vermont:

- Conducted the 2021 Button Up Vermont weatherization campaign: 31 communities registered.
- Developed a suite of campaigns to support the mutual goals of Efficiency Vermont and town energy committees.

4.5 Financial Services

Efficiency Vermont continued coordinating with credit unions that provide capital for the following loan products.

4.5.1 Home Energy Loan

A total of 290 loans to homeowners totaling $3,091,863 in loan principal closed in 2021. The cost to Efficiency Vermont for those loans was $368,734 in interest rate buy-down (classified as incentive payments) and $63,794 in loan loss reserve deposits (which are refundable if they are not utilized). Of the 290 loans closed, 24% were for low-income customers (below 80% of area median income) and 48% were for moderate-income customers (80–120% of area median income). In 2021, Efficiency Vermont added GSHPs as an eligible technology for the Home Energy Loan. It also lowered the maximum loan amount from $40,000 to $20,000.

4.5.2 Business Energy Loan

A total of 9 loans totaling $190,900 in loan principal closed in 2021. Of the 9 loans closed, 100% were for SMB customers, including farms and agricultural businesses, food sales and service, and lodging facilities. Measures supported included heat pumps, insulation and air sealing, commercial kitchen equipment, and wood heating systems

4.6 Data Analytics

Efficiency Vermont:

- Continued to maintain and operate software infrastructure to collect and store Advanced Metering Infrastructure (AMI) data from GMP, Stowe Electric Department, Vermont Electric Coop (VEC), and Washington Electric Coop (WEC).
- Completed its case study on the use of AMI data to conduct whole facility measurement and verification for custom retrofit projects. Findings showed potential to increase efficiency and reduce metering costs for those projects that passed prescreening criteria.
- Investigated potential solutions for standardized access queries of AMI data warehouse that resulted in a standardized data access library for use by Efficiency Vermont.
- Supported the Department's contractor on the completion of the Time Value of Efficiency study by providing program and utility data for use in the study, as well as review of draft findings.

- Developed a screening and reporting tool to support customer engagement in the FLM program. Provided ongoing support for FLM efforts, including refinement of the flexible load potential tool to align with finalized QPI definitions.

4.7 Heating, Ventilation, Air Conditioning, and Refrigeration

Efficiency Vermont:

1. Observed continued high demand for CCHPs (supported 9,647 units in 2021) despite supply chain disruptions due to COVID-19.
2. Integrated all electric distribution utilities into the midstream CCHP program, which resulted in a larger discount, for a wider range of heat pumps, that was universally available to all Vermont ratepayers. This shift in program design allowed Efficiency Vermont and its utility partners to more cohesively message and promote heat pump technologies to customers. The change in program design was enabled by technical advancements and continuously increasing rates of market adoption of heat pump technologies. Efficiency Vermont also shifted centrally ducted heat pump support to the midstream program.
3. Launched a standard rebate for GSHPs. All electric distribution utilities (excluding VPPSA utilities and Hyde Park) began offering a consistent and aligned program administered by Efficiency Vermont. These utility partnerships enabled compelling rebate offers, and customer interest in GSHPs was high.
4. Experienced high adoption of high-efficiency condensing units and evaporators in its commercial refrigeration program. More qualifying equipment became available to refrigeration wholesalers, and more contractors gained familiarity with this technology, both of which helped reduce barriers to adoption and increase adoption rates.

4.7.1 Refrigerant Management

Efficiency Vermont implemented a refrigerant management portfolio to provide meaningful GHG and energy savings. Offers included refrigerant leak repair (including installation of permanent leak detection systems, where appropriate), natural refrigerant freezers and refrigerators, and natural refrigerant racks. Efficiency Vermont:

5. Completed project modeling for refrigerant “swap-outs”; replacing high global warming potential (GWP) refrigerants with low-GWP refrigerants. Efficiency Vermont analyzed specific grocery store applications, based on the unique characteristics of refrigeration systems. The modeling tool compared the energy use of a refrigeration system with and without the swap-out, which was an effective tool in demonstrating the anticipated energy savings and system changes from such swaps.
6. Launched an offer for natural refrigerant residential refrigerators & freezers. The main offer was a midstream rebate focused on high efficiency natural refrigerant units that meet the 2020-2021 Emerging Technology Award (ETA) for advanced adaptive compressor equipment. ETA refrigerators & freezers contain low-GWP refrigerants, low-GWP foam insulation, and achieve increased energy savings through new compressor technology. An advanced adaptive compressor system uses sensor-driven controls to modulate the compressor at variable speeds, achieving increased energy savings over traditional refrigerators which only operate at a fixed

compressor speed. In 2021, a total of 1,221 refrigerators and 6 freezers containing natural refrigerants were sold through the Retail Products Platform a national midstream initiative that works with retailers to increase the adoption and sale of efficient products.

7. Utilizing modeling, Efficiency Vermont developed a standardized methodology for calculating energy savings for grocery locations with permanent leak detection systems. These grocery locations then reported leak reductions in line with our assumptions. On the basis of these promising results, Efficiency Vermont scaled up implementation of this measure. There are approximately 60 large grocery stores and over 400 medium sized markets where this technology could be beneficially employed.
8. Worked with a refrigeration manufacturer in its ongoing effort to make CO_2 condensing units available.

4.8 Flexible Load Management

Efficiency Vermont:

- Convened an FLM-focused subset of the Utility Working Group (previously mentioned in Section 4.1) to explore a statewide approach for implementing FLM services. The FLM sub-group collaborated on how to scale FLM in Vermont and encourage FLM program participation by leveraging Efficiency Vermont's statewide presence, technical expertise, and supply chain engagement, with utilities' ability to control load and set rates. The subgroup focused on opportunities and challenges to adopting open communication standards in the residential market, as well as sharing lessons learned and approaches for developing/improving EVSE programs. Based on these learnings, Efficiency Vermont worked with VPPSA on a new EVSE pilot using Open Charge Point Protocol, which was expected to launch in 2022.
- Continued to provide direct program support to WEC's PowerShift program: 18 new customers, and one new HPWH customer joined the program in 2021.
- In response to Utility Working Group recommendations and to bring more awareness to trade ally partners about utility FLM programs, created an EVSE installer category for the EEN (see section 4.3.1 for more details).
- Performed research into HPWHs with CTA-2045 ports which allow communication between the water heater and the distribution utility. Research shows initial promise for integrating FLM capabilities among HPWHs from different manufacturers.
- Continued its technical and program support assisting in the implementation of GMP's FLM "2.0" pilot for commercial and industrial customers. At the end of 2021, GMP had ten businesses and institutions with operational FLM controls and exceeded 2021 (kW) savings goals. Customers include a mix of state buildings and colleges, health care, manufacturing, and municipalities (wastewater treatment, and library).
- Began discussions with VEC, VPPSA, and Stowe Electric Department regarding FLM opportunities for commercial customers. Efficiency Vermont and the utility partners explored the potential of mirroring GMP's FLM "2.0" framework in their respective territories and assessed the feasibility of installing FLM controls as part of broader energy efficiency controls upgrades.

4.9 ACT NO. 151 PROGRAMS

The Commission approved Efficiency Vermont's motion to amend its 2021-2023 Demand Resources Plan (DRP) pursuant to Act No. 151. This enables up to $2,000,000 per year of Efficiency Vermont's 2021-2023 energy efficiency charge (EEC) funds, for programs, measures and services that reduce GHG emissions in the transportation and thermal energy sectors. Efficiency Vermont conducted planning and implementation activities to expand EV supply chain development and to support EV consumer outreach and education; and planning activities for limited programs that combine weatherization with heating electrification for low-income customers. Efficiency Vermont utilized an extensive stakeholder process to ensure its Act No. 151 proposal and programs were additive and complementary to, and will not replace or be in competition with, either the Tier III energy transformation projects implemented by electric distribution utilities in the statewide EEU service area, or programs or services offered by State agencies and departments.

4.9.1 ELECTRIC TRANSPORTATION

Efficiency Vermont:

- Launched its EV dealer program, a network of new and used car dealers demonstrating a commitment to promoting EVs. 24 dealers enrolled. Efficiency Vermont provided participating dealers with financial and technical support for dealership investments in EV charging and service infrastructure, incentives designed to encourage sales staff to learn about and sell more EVs (12 dealers received incentives for such improvements, including 11 direct current (DC) fast charging stations), and trainings covering EV topics of interest to the Vermont dealer community. The EV dealer program is offered through Efficiency Vermont's EEN (see section 4.3.1 for more details). Additionally, Efficiency Vermont provided a webinar to the Vermont auto dealers community to inform them about the EV dealer program and how to enroll.
- Launched the statewide EV consumer awareness and education campaign, in partnership with Drive Electric Vermont (DEV), electric utilities, and State agencies. Advertising channels included broadcast and streaming television, broadcast radio, digital, community newspapers, direct mail, community events, and an installation at Burlington International Airport. Since launching the campaign:
    - The DEV website saw a 164% increase in users, 151% increase in sessions, and 145% increase in pageviews.
    - Radio live reads have proven to be especially useful – radio hosts were taking 30 seconds worth of talking points and adding their own stories and positive insights. The live reads ended up being closer to 01:30 minutes.
    - Paid advertising offset organic traffic (historically, organic traffic has comprised approximately 60% of DEV website traffic). Both organic and paid traffic comprised approximately 30% of website traffic, indicating: 1) Efficiency Vermont advertisements engaged a broad audience and encouraged click-throughs to get to the website; and 2) content on DEV is

authoritative and search-engine-optimized (a healthy organic traffic benchmark Efficiency Vermont generally strives for is 16%).
    - Efficiency Vermont experienced significant levels of feedback on social media (hundreds of EV-related Facebook comments over the span of a few weeks) and to the contact center after launching the video advertisements. The feedback appeared to be polarizing, with some responders sharing positive experiences that provoked many responders with negative opinions or misconceptions about EV technology. This underscored the need for continued education and awareness-building to encourage EV education and awareness building, healthy informed discussion, and to persuade Vermonters to purchase or lease an EV.
- Updated the Efficiency Vermont website to include improved content and messaging on EVs in the transportation section, new rebate pages for EV incentives (available through electric utilities' Tier III programs and the State of Vermont), new blogs focused on EVs, and the addition of EV dealers and EVSE contractors to the Find a Pro tool.
- Updated the DEV website (for more information, see Section 4.10).
- Coordinated with the Department on the development of program and market metrics to understand how the Vermont EV market is evolving. The metrics serve as leading indicators for desired long-term market results focused on the two key areas of program activity: dealership engagement and consumer education (see Sections 8.5-8.7 for Efficiency Vermont's Act No. 151 EV program metrics and results).
- Analyzed responses collected as part of its dealer research effort (one-on-one interviews with 25 new and used car dealers around the state to learn more about dealership business models, perspectives on EVs, and support needs for selling EVs) and shared insights and key themes with stakeholders including electric distribution utilities, the Vermont Vehicle and Automotive Distributors Association, DEV stakeholders, and Vermont Agency of Transportation. These conversations provided an invaluable learning opportunity and were a key step in ensuring that the program design aligned with dealer support needs and would effectively address market barriers. It also gave Efficiency Vermont added confidence that its program concepts were sound. Key themes of the responses were:
    - Dealer EV readiness varies across the board, but most dealers see EVs as the future.
    - Driving range was a top concern for dealers, both proponents and skeptics, and may even create some hesitancy among some dealers to promote EVs to their customers.
    - Whether dealers feel that EVs are a good fit for their customers depends on factors such as driving habits, geographic location, and lifestyle.
    - A big part of the "sale" happens before consumers arrive at the dealership, as most consumers do online research beforehand.
- Performed consumer insights research to learn more about Vermonters' car shopping behaviors and how they relate to EV purchases. Fifteen one-on-one interviews were conducted. The qualitative research focused on understanding shopping behavior and EV motivations and barriers within BIPOC and low-income communities.

4.9.2 Thermal Efficiency for Electrically Heated Buildings

Efficiency Vermont engaged with utility partners, the Office of Economic Opportunity, the Department, and other stakeholders regarding the development of programs to support low-income customers in combining weatherization with heating electrification in 2022 and 2023.

4.10 Customer Engagement

Efficiency Vermont customer engagement activities and results including the following:

- On its core website, Efficiency Vermont welcomed 362,747 unique users, who spent an average of two minutes and 22 seconds on the site. In total, the website experiences 1,679,724 pageviews.
- Efficiency Vermont's Find A Pro or Retailer tool saw 197,205 unique page views, which is a 2% decrease compared to 2020. Top searches were for weatherization and heat pump contractors.
- Efficiency Vermont's digital marketplace tool, (https://marketplace.efficiencyvermont.com/) where Vermonters can read reviews, find rebates, and compare equipment, welcomed 78,266 unique visitors with a total of 208,144 pageviews. The most commonly searched equipment included refrigerators, thermostats, and electric water heaters. The tool also launched several new categories including an expanded kitchen equipment section, lawn & garden, and safety & preparedness.
- Efficiency Vermont's Facebook page gained 614 new followers, bringing the total to 18,582 (see more information on digital and earned media activities in General Public Education, Section 5.1.3).
- Efficiency Vermont's blog (https://www.efficiencyvermont.com/blog) which features market insights, customer stories, and "How To" guides, saw a 250% increase in traffic for a total of 170, 632 unique page views. New blogs included, "Three easy steps to get started on a home weatherization project", "Why diversity, equity, and inclusion matter when it comes to energy efficiency", "Food shelf refrigerators help get fresh produce to more Vermonters", and "The top five reasons people think they don't want an electric car".
- Efficiency Vermont experienced increased newsletter subscriptions across all markets:
    - *Watts New*, a residential e-newsletter added 1,143 subscribers in 2021 for a grand total of 26,214 subscriptions
    - *Business Solutions, a* SMB newsletter gained 225 new subscribers in 2021, bringing the total subscriptions to 2,567
    - E*VT Insider,* a newsletter geared toward partners, stakeholders, and energy committees gained 284 new subscribers, bringing the total to 339.
- Designed individual website pages for each Tailored Community in partnership with VPPSA (see Section 4.4 for Tailored Communities).
- Issued a press release and held a press conference which received coverage from two Vermont outlets, regarding the launch of the voluntary Home Energy Profile (see Section 5.1.6 for the Home Energy Profile).

- Supported the relaunch of two partner brand websites, Drive Electric Vermont and Button Up Vermont. Both sites were redesigned to improve user experience and highlight the information residents were most likely to seek. Efficiency Vermont also created pages to help Vermonters understand more about EVs and what rebates were available for buying or leasing an EV or installing a charging station.

4.11 Annual "Energy Pulse" Brand Performance Research

In recognition that Vermonters fund Efficiency Vermont through the EEC, yet only some participate in programs, Efficiency Vermont fields an annual survey to understand impact on the Vermont market, outside of the QPIs. This typically includes understanding the overall impression and value of the organization, and its Net Promoter Score (NPS).[14] At the end of 2020, Efficiency Vermont's NPS was 37 for residential survey participants, and 48 for SMBs. That score puts Efficiency Vermont roughly in the 90th percentile for utilities nationally.[15]

Because the 2020 survey was conducted in late 2020, rather than repeat the study in 2021, Efficiency Vermont sought deeper insight into how residential Vermonters believed Efficiency Vermont could better serve their needs. Rather than proceeding with the annual quantitative survey, in 2021 Efficiency Vermont conducted a qualitative research effort. Residential focus groups were recruited using the Vermont Voter Registration List to identify Vermont residents with a mix of political affiliations, geographic representation, gender, and income. These focus groups were conducted by a third-party contractor. Efficiency Vermont sponsorship was not revealed during recruitment or while facilitating focus group discussion. The residential focus groups sought to understand the role Vermonters imagine for a state energy organization, Vermonters' attitudes about climate change and state climate, and finally, perceptions of Efficiency Vermont and its value to the state. The respondents offered eight principal observations:

- They continue to see a great need and opportunity for energy efficiency in Vermont.
- They believed it should be delivered by a statewide *independent* initiative. "Independent" was key to the acceptance of the opportunity because the entity would have their best interests in mind (vs. a for-profit company's bottom line).
- They valued a singular source for unbiased, transparent information. Those who had right-leaning political views felt that the entity needed to be "depoliticized", while leftward leaning participants felt that the organization should speak to a "higher purpose" (community or environmental benefits).
- They believe the principal vehicle for addressing the opportunity is education and sought answers to a wide variety of energy related questions (What are the best solar panels? What is the true cost of solar energy generation and installation? Tell me about EVs? And questions related to battery disposal and energy usage).

[14] Net Promoter Score is an index ranging from -100 to 100 and measures the willingness of customers to recommend a company to others. It is used as a proxy for gauging customer's satisfaction with a company and loyalty to the brand.

[15] https://delighted.com/nps-benchmarks

- They perceived Efficiency Vermont to be the entity to lead that initiative. No other organization was named or considered. Additionally, they believed that Efficiency Vermont was already doing this work.
- While all participants were aware of Efficiency Vermont, there was not a high level of familiarity with how the organization was funded and as such, participants expected that Efficiency Vermont could do more than its current work as an electric EEU might allow (examples of this included work in solar/wind, expanded thermal, electrification/fuel switching and grid planning).
- They have clear ideas as to what Efficiency Vermont *should* do and believed Efficiency Vermont should undertake larger programs of community and state level impact (ex: solar/wind farms) as well as local level, person-to-person initiatives (ex: street canvassing and one-on-one education and support). They felt that Efficiency Vermont addressing macro issues would trickle down to the decisions that individuals make.
- The respondents were largely in agreement that climate change was a reality and that the effects would impact energy use and reliability. They also believe that programs to lower GHG emissions should be within the purview of Efficiency Vermont, however, they differed in how it should be addressed programmatically and communicated depending on their political affiliation. The left-leaning group felt that climate change mitigation should be a strategic objective, a pillar of communications, and that programs should be built to reduce the causes and mitigate the impacts of climate change. The right-leaning group agreed that mitigation efforts were needed but felt that Efficiency Vermont did not need to incorporate "climate change" messaging into communications (they preferred to focus on the savings, reliability, and personal benefits of GHG reduction programs).

5. DEVELOPMENT AND SUPPORT SERVICES

Efficiency Vermont engaged in efforts that built customer awareness, knowledge, and motivation regarding energy use reduction; support efforts to shape energy efficiency policies; and identified approaches for optimal service development, delivery, and improvement. DSS activities may not directly result in efficiency savings but represent valuable aspects of energy efficiency service delivery and development, and include activities in the following categories: education and training, applied research and development, planning and reporting, evaluation, administration and regulatory affairs, and information systems. These efforts are essential to Efficiency Vermont's efforts to deepen energy savings and to have a lasting, positive impact on Vermont households, businesses, and communities.

5.1 EDUCATION AND TRAINING

5.1.1 CODES AND STANDARDS SUPPORT—RESIDENTIAL AND COMMERCIAL / INDUSTRIAL

Efficiency Vermont:

- Offered 16 Residential Building Energy Standards (RBES) trainings with a total of 172 attendees and 7 Commercial Building Energy Standards (CBES) trainings with a total of 73. Efficiency Vermont co-presented two energy code (RBES and CBES

respectively) trainings for municipal government officials with the Department. This provided context regarding the roles and responsibilities of local officials relative to energy codes.
- Through the Energy Code Assistance Center, managed 631 inbound and outbound residential code assistance communications, and 188 related to commercial code assistance. This included technical support as well as support for code material and training requests.
- Attended 6 total code collaborative meetings to discuss revisions to the CBES and RBES prior to drafting the next code updates.
- In response to builder questions, worked with the Department to identify errors and recommend revisions to the alteration standards in the RBES International Code Council guidelines, RBES handbook, and REScheck requirements.

5.1.2 Energy Literacy Project (ELP)

Efficiency Vermont worked in coordination with K–12 schools throughout the state to inspire lifelong commitment to energy efficiency, conservation, and environmental stewardship in Vermont's youngest generation. In 2021, Efficiency Vermont's contract implementer, Vermont Energy Education Program:

- Enrolled 126 Vermont schools, delivered 68 workshops to 43 schools, and sent 119 energy kits to 67 schools with continued support on curriculum development and implementation.
- Engaged 73 Vermont teachers from 42 schools in Professional Learning programs.
- Supported 142 homeschool participants through virtual STEM labs.
- Designed workshops and modularized kits aligned with Next Generation Science Standards- for use by educators.

5.1.3 General Public Education

To increase public awareness of energy efficiency and available services, Efficiency Vermont developed, managed, and shared key messages and materials through traditional print and broadcast media, social media, and website content. Attendance at community events and energy efficiency presentations was curtailed substantially due to COVID-19. In 2021, efforts focused on:

- **Earned Media***:* Efficiency Vermont was mentioned nearly 200 times by media outlets across Vermont and beyond. Media coverage was driven in part by Efficiency Vermont press releases.
- **Efficiency Vermont website:** Efficiency Vermont's website engaged 362,747 users, garnering almost 1.68 million page views.
- **Newsletter Subscriptions***:* Newsletter subscriptions to Efficiency Vermont's newsletters increased by 7% year-over-year, and now has 29,798 subscribers.
- **Social Media***:* Efficiency Vermont engaged with customers on various social media platforms, sharing information about programs, events, and initiatives. As of the end of the year, Efficiency Vermont had:
    - 18,582 Facebook followers
    - 4,635 Twitter followers
    - 1,808 Instagram followers

- 1,129 LinkedIn followers

5.1.4 Better Buildings by Design Conference

Efficiency Vermont hosted its 23rd BBD conference virtually on February 2–4, offering trade allies access to leading experts in the energy efficiency and building performance fields. It also showcased the latest residential and commercial building products and services in addition to offering technical workshops to expand contractors' qualifications and expertise. The conference welcomed 537 total virtual attendees and featured 32 workshops, 74 sponsors, and 55 professional credit designations. Evaluations reflected a positive customer and sponsor experience overall, though many participants mentioned looking forward to returning to an in-person format, given that networking is a major benefit of the conference.

5.1.5 Customer Support

Efficiency Vermont's Contact Center provided Vermonters with information about electrical, thermal, and transportation efficiency; conservation; resources; and referrals. The Contact Center:

- Managed 26,652 customer contacts, which included all inbound and outbound calls, emails, and live chats.
- Tracked activity breakout of those contacts by market as follows: 88% residential, 12% commercial.
- Recorded the following key contact topics:
  - 25% residential HVAC
  - 20% residential weatherization
  - 13% residential efficient products
  - 9% low income
- Successfully implemented language translation services.

5.1.6 Building Labeling and Benchmarking

Efficiency Vermont:

- Formed a Vermont Home Energy Profile advisory committee and established its mission statement: Increase transparency of home energy costs and features to drive awareness and valuation of a home's energy attributes and promote investment in energy improvements where opportunities exist.
- Finalized the Vermont Home Energy Profile tool, https://www.clearlyenergy.com/vermont available to all Vermonters, which is managed by NEEP. The Home Energy Labeling advisory committee issued a press release and Zoom call for media. VT Digger published the press release and WPTZ-TV aired a brief story.
- Approximately 67 profiles were created by the end of 2021 providing customers with information about their home energy use and next steps to pursue energy improvements.

5.2 Applied Research and Development

Efficiency Vermont engaged in a range of research and development projects to gather

information on areas with potential for inclusion in future programming.

5.2.1 Technology Demonstrations

Technology demonstration funding supported applied research, development, and demonstrations to optimize the creation of cost-effective solutions for meeting Efficiency Vermont's long-term RA goals. Efficiency Vermont engaged in these activities to advance the goals of sound product and program design through field testing, demonstrations, and research into emerging technologies and implementation strategies. Efficiency Vermont maintained a webpage at https://www.efficiencyvermont.com/media-room/whitepapers, providing the public with access to information about technology demonstration efforts. An overview of 2021 activities follows.

Deeper Energy Savings through Advanced Regression Modeling

Efficiency Vermont selected 10 customers in five market sectors to pilot the new utility data energy reports, which are intended to drive customer engagement and identify opportunities for energy efficiency using AMI data. Efficiency Vermont's paper describing this work was selected to be presented at the 2022 International Energy Program Evaluation Conference.

Greenhouse Gas Reduction

Efficiency Vermont undertook five projects:

- Embodied carbon of weatherization materials compared with operational energy savings in existing homes: In 2021, Efficiency Vermont identified the point at which net carbon benefit is realized using carbon-friendly materials versus standard practice.
- Outreach and education on air sealing and insulation material embodied carbon in residential new construction. In 2021, Efficiency Vermont shared 2020 research results with industry professionals and pursued a new demonstration project using Vermont-manufactured low-carbon material.
- Evaluation of commercial new construction framing materials for embodied carbon impacts: In 2021, Efficiency Vermont completed a life-cycle analysis of timber-frame versus steel-frame construction for a typical small commercial building in Vermont.
- Calculating time of use carbon impact of electrification measures: In 2021, Efficiency Vermont estimated measure-specific carbon savings shapes, measure-specific carbon pollution shapes, and whole-building carbon pollution shapes for electric efficiency measures.
- Assessment of a Vermont cold chain market for GHG and energy reduction potential: In 2021, Efficiency Vermont interviewed industry stakeholders and estimated potential carbon and cost savings from optimizing milk refrigeration and pick-ups at 22 Vermont dairies. Efficiency Vermont also confirmed the opportunity for decreasing Vermont-grown produce loss in the state.

Healthcare Partnership

In alignment with customer interest and national trends, Efficiency Vermont evaluated the potential impacts of energy efficiency services on health in residences and commercial

buildings. Efficiency Vermont conducted the following activities:

- Shipped indoor air quality (IAQ) monitors to 3 households for post-retrofit data collection. Completed radon mitigation, heat recovery ventilation installation, and trash removal in pilot homes.
- Provided completed participant surveys for the fall-prevention pilot program to the Vermont Department of Health for analysis.
- Performed IAQ testing in 11 schools, and provided pre- and post-retrofit surveys to those schools, in order to understand the impact that HVAC improvements had on school energy use and air quality.

Resilience Investigations

Efficiency Vermont undertook four projects:

- Two field pilots of phase change materials—one testing thermal blanket tiles coupled with a variable refrigerant flow heat pump in a small commercial building, and the other testing a thermal tank coupled with a variable refrigerant flow air-to-water heat pump.
- Design and cost estimation of a DC microgrid housing community.
- Designed a research project to assess the impact of air sealing on comfort during a power outage and the potential for pre-heating radiant slabs for thermal storage in advance of a predicted peak load event or power outage.

Societal Screening Test

Efficiency Vermont researched and documented other jurisdictions' screening practices for accounting of health non-energy benefits, transportation electrification, GHG reduction / environmental benefits, and incorporation of time-specific load impacts.

5.3 Planning and Reporting

5.3.1 Annual Plans and External Reporting

Efficiency Vermont prepared and submitted required documents to the Commission, the Department, and other stakeholders. The below documents were presented in fulfillment of requirements specified under its regulations, to maintain accountability and provide accurate tracking of progress for service delivery optimization, public benefit and the benefit of entities outside Vermont seeking replication:

- 2020 Monthly reports for November and December, and monthly invoices for 2021
- 2021 Quarterly reports for March, June, and September, including any program change or budget variance forecast notices as needed.
- 2020 Budget Variance Report
- 2020 Savings Claim Summary Report
- 2020 Annual Report
- 2020 Administrative Cost Report
- 2020 Designated Downtown report
- 2022 Update to the 2021–2023 Triennial Plan

5.3.2 Demand Resources Plan

The Commission approved Efficiency Vermont's motion to amend its approved 2021–2023 DRP pursuant to Act No. 151. This has allowed Efficiency Vermont to reallocate up to $2,000,000 per year of its 2021-2023 EEC funds, for programs, measures and services that reduce GHG emissions in the transportation and thermal energy sectors (see Section 4.9 for more details).

5.3.3 Vermont System Planning Committee Participation (VSPC)

Efficiency Vermont participated in quarterly VSPC meetings. At one such meeting, Vermont Electric Power Company released the first draft of its 20-year Long-Range Transmission Plan. Efficiency Vermont participated in the buildup of this plan, supporting the representation in the plan of the impact of Efficiency Vermont's efficiency programs.

5.3.4 Independent System Operator–New England Forward Capacity Market (FCM) Administration

Efficiency Vermont qualified 6.2 megawatts (MW) of additional summer capacity and 8.1 MW of additional winter capacity. It also bid capacity exceeding the obligation into monthly reconfiguration auctions, to monetize a small amount of performance above its obligation, resulting in over $181,000 of additional revenue.

5.3.5 External Non-Regulatory Reporting

Efficiency Vermont produced and distributed items in support of the following:

- Electric distribution utility Tier III Memorandums of Understanding and benefits reports.
- Periodic and ad hoc reports summarizing Efficiency Vermont performance for: electric distribution utilities, Regional Planning Commissions (RPCs), Energy Action Network (EAN), town energy committees, Targeted Communities, NEEP, Regional Greenhouse Gas Initiative, ISO-NE energy efficiency forecast, and U.S. Energy Information Administration.
- Efficiency Vermont performance and pipeline reports (for VPPSA service territory).
- EAN's 2021 Vermont Energy Dashboard.
- EEU shared-services agreements with Burlington Electric Department and VGS.
- NEEP's Regional Energy Efficiency Database.
- Quarterly electric distribution utility reports summarizing contributions, incentives, customer annual energy and bill savings, customer call volume, and projects by service type.
- Hardwick Electric Department historical (2016–2020) commercial pipeline and savings report.

Additionally, Efficiency Vermont:

- Created a biweekly report to monitor any overlap between Stowe Electric Department Tier III and Efficiency Vermont EEU projects that may be ripe for collaboration.
- Developed a new BED Home Energy Loan tracking report.
- Created an All-state RPC report including newly available 2020 EV data (this report could be run for individual RPCs or for the entire state). Also, Efficiency Vermont

created a Vermont distribution utility version of the report that could be run for any distribution utility territory.
- Deployed two new town-level savings and consumption data reports to enable Efficiency Vermont staff to better respond to diverse partner needs and requests for data.

5.4 EVALUATION

As an essential part of its reporting efforts, Efficiency Vermont engaged in activities designed to maintain the accuracy of reported savings claims. These activities included the following initiatives.

5.4.1 ANNUAL SAVINGS VERIFICATION

Efficiency Vermont supported the annual savings verification process for program year 2020, by coordinating with the Department's third-party evaluation contractor, including: transferring the 2020 program tracking database, providing sampled project data and reviewing evaluation findings and recommendations. The results of the savings verification were:

- Efficiency Vermont's realization rates for electric efficiency programs in 2020 were 98.4% for MWh, 99.8% for Winter kW, 97.5% for summer kW, and 98.2% for Lifetime MWh savings.
- Efficiency Vermont's realization rate for TEPF efficiency programs in 2020 was 98.8% for MMBtu savings.

5.4.2 TECHNICAL ADVISORY GROUP (TAG)

Efficiency Vermont's TAG activities included discussion and review of the Technical Reference Manual (TRM). In addition to TRM review, TAG discussed technical topics related to EEU savings claims, reviewed Program Implementation Procedures (PIPs), and coordinated other EEU evaluation efforts. Efficiency Vermont:

- Completed a peer review of net-to-gross practices from peer jurisdictions and a proposal for an updated net-to-gross approach for Vermont EEUs, including analysis of net-to-gross updates to custom measures.
- Reviewed the 2020 savings claim for projects claiming savings persistence for operational changes.
- Provided program updates for the Home Performance with ENERGY STAR program, including improvements to Efficiency Vermont's quality assurance processes.
- Shared planned updates to the structure of the 2022 residential new construction program with the TAG.
- Coordinated responses to data and information requests that were provided to the Department's contractors for the residential and commercial market assessments.
- Reviewed heat pump refrigerant leak data, and (PIPs) for FLM, refrigeration management, retail lighting, and VFDs.
- Conducted walk throughs of analysis tools that estimate savings for integrated heat pump controls and custom FLM projects.

5.4.3 Technical Reference Manual (TRM)

Efficiency Vermont maintained, updated, and ensured the reliability of the TRM, which characterizes energy-saving measures on the basis of numerous parameters: annual electric savings, annual coincident peak savings, annual fossil fuel energy savings, incremental costs and measure lives, and other applicable resource savings such as water savings and operational and maintenance cost savings. TRM efforts included continuous process improvement activities and quality assurance and evaluations of high-impact efficiency programs and measures. Efficiency Vermont developed 20 new measure characterizations and completed updates for 2 existing characterizations that were submitted for review by the Department and its contractor, including: LED fixtures and lamps, heat pumps, large appliances (refrigerator, commercial dishwasher, clothes dryer), advanced thermostats, energy savings kits, retail products platform, room air conditioners, controls for evaporator fan motors, and deemed FLM measures for residential electric water heaters and EV chargers.

5.4.4 ISO-NE FCM Metering, Monitoring, and Evaluation

The FCM evaluation process entailed the identification and metering of completed projects, followed by the acquisition of data to confirm projected savings for program year (PY) 2020 for the 62 sites selected for evaluation. Efficiency Vermont completed 14 large stratum deployments and used the Option-C software framework to determine which of the PY 2020 projects were good candidates for Option-C evaluation using only AMI data, promising to make the evaluation simpler and less costly. Additionally, Efficiency Vermont completed the PY 2019 evaluation, which spilled over into 2021 due to COVID-19 impacts on metering, obtaining achieved realization rates of 93% for winter and 93.3% for summer for the 21 sites selected for evaluation. Additionally, Efficiency Vermont worked with partners on a cohort measurement and verification analysis of grocery store projects. This included collection of data for three natural refrigerant systems, providing key insights and information on how these complex and relatively new systems perform in Vermont.

5.4.5 Quality Management

Service Quality and Reliability Plan

Working with the quality management contractor, Efficiency Vermont revised the transactional customer satisfaction surveys. Efficiency Vermont achieved the following service quality results:

- Contact Center metrics
    - 8 seconds average speed to answer
    - 94% of calls handled by a live agent during normal business hours
    - 2% call abandonment rate
- Complaints
    - Received 2 complaints
    - Followed up within 24 hours—100%
    - Resolution within 12 business days—100%

- General customer satisfaction (as measured by the percentage of customers who contact Efficiency Vermont and are satisfied or very satisfied with Efficiency Vermont customer service; should be greater than or equal to 80%)[16]
    - Residential = 86%
    - Commercial = 93%
- Transactional customer satisfaction (as measured per each transaction category; annual percentage of survey respondents with average service rating of 3 or better equals 90%)
    - Commercial prescriptive projects = 86%
    - Residential New Construction = 100%
    - Home Performance with ENERGY STAR = 97%
    - Custom Commercial and Industrial = 96%

5.5 ADMINISTRATION AND REGULATORY AFFAIRS

5.5.1 GENERAL ADMINISTRATION

Efficiency Vermont coordinated service implementation across various functions; performed budget management; participated in regular check-ins with the two other EEUs; and managed, monitored, and conducted internal communication of overall performance and spending. Efficiency Vermont also undertook activities in key organizational functions, including preparing and administering biweekly staff town calls and manager exchanges, weekly leadership team meetings, and the 2022 EEC rates calculation. Additionally, the data steward for Efficiency Vermont reviewed third-party requests for Efficiency Vermont information consistent with its guidelines and processes for sharing intellectual property.

5.5.2 REGULATORY AFFAIRS (NON-DRP)

Efficiency Vermont:

- Presented at a national ACEEE webinar, Supporting Rural Communities Through State Energy Efficiency Programs, on its regulations designed to ensure equitable distribution of services across the state.
- Filed an updated Intercompany Cost Allocation Procedures, which included updates to accounting procedures.
- Explored the time-value of energy efficiency, with the goal of better understanding how efficiency measures affect local and regional demand profiles.
- Monitored ISO-NE's proposal at the Federal Energy Regulatory Commission to remove energy efficiency from the Pay for Performance Program administered through the ISO-NE FCM tariff.
- Filed a proposed annual performance award compensation mechanism that was approved by the Commission in Case No. 21-0838-PET, thus establishing the basis for an annual payment of a portion of Efficiency Vermont's performance award.
- Responded to a request for information by the Department seeking input on new policies, technologies, and market trends that should be considered in the 2022 update to the Vermont Comprehensive Energy Plan. VEIC submitted comments on

[16] These percentages represent customers who responded to survey questions.

the draft plan, including recommendations for greater detail on the resource that energy efficiency is in the state energy system, and that energy efficiency continues to be the lowest-cost carbon reduction engine in the state.

- Filed testimony and exhibits in Case No. 21-1500-PET, the EEU Overall Performance Assessment proceeding, in support of its claim that VEIC has satisfied its responsibilities as the administrator of Efficiency Vermont, that net benefits are not likely to result from additional proceedings that consider alternative EEU implementation entities, and that VEIC's Order of Appointment to serve as the provider of Efficiency Vermont services should be reissued for a term of 11 years to take effect January 1, 2022.
- Filed a proposal in Case No. 21-2701-INV (the 2022 EEC rates proceeding) for an alternative calculation methodology for the 2022 EEC rates to go into effect for electric bills rendered on and after February 1, 2022.
- Participated in quarterly meetings with the Department's Commissioner and Energy Efficiency Resources Division management, established in order to discuss a range of timely or long-term strategic topics.
- Filed testimony in Case No. 21-2436-PET that described the screening values and methodologies that Efficiency Vermont recommended the Commission adopt for testing the cost-effectiveness of EEU efficiency portfolios and measures.

5.5.3 Public Affairs

In addition to providing physical or virtual representation at policy forums, meetings, and conferences around the state, Efficiency Vermont:

- Participated in extensive testimony, emails, and meetings with legislators regarding federal COVID-19 relief funds, IAQ grant funds, and Act No. 151.
- Testified before multiple committees in the Vermont Legislature on the State budget, which included funds directed to Efficiency Vermont: $5 million in federal American Rescue Plan Act (ARPA) of 2021 funds for continuing enhanced weatherization incentives; and $2 million for workforce development initiatives.
- Produced a report to the legislature on the 2020 School IAQ Grant program, pursuant to Sec. A51 (g) of Act No. 120. The report was presented to the House and Senate Education Committee in March of 2021.
- Launched the Weatherization Workforce Group as directed by the Legislature. Efficiency Vermont led the effort to connect stakeholders, hold meetings, and convene the group to develop plans for the coordinated delivery of a standardized statewide Building Sciences curriculum that includes weatherization.
- Participated in the Energy Savings Counseling Working Group as directed by the Legislature. Efficiency Vermont was part of a group of stakeholders that met periodically throughout the year to discuss ways to help people make better-informed decisions about energy use. The coalition submitted a written report to the legislature on October 15th.

5.6 INFORMATION SYSTEMS

5.6.1 CORE BUSINESS SOFTWARE APPLICATIONS

Efficiency Vermont supported existing software applications that enable program implementation activities, expanded existing application features, and developed new applications to replace current program software. A major focus in 2021 was improving the existing prescriptive measure management system, and the application that interacts with prescriptive measures, to better meet the needs of Efficiency Vermont programs. Progress on this project in 2021 included:

- Addressing technical debt and implementing a system of record solution for measure code, measure description, and end uses.
- Development of centralized measure management - simplifying prescriptive measure administration functionality to drive efficiency and accuracy.
- Improving measure versioning strategies for incentive, savings and funding changes.
- Creation of a prescriptive analysis
- Introducing the ability to add and edit a basic measure technology from the measure management system

The final release of measure management functionality into the production system is not expected until the end of 2022 or early 2023.

Additional activity highlights in 2021 included:

- Retirement of the HERO program, the legacy tool for Home Performance with ENERGY STAR analysis and project processing.
- Navigator release in support of Efficiency Vermont regulatory changes for GHG reporting, FLM, and risk discount factor changes.
- Tracker maintenance release to improve project management of incentive offers, voucher search functions, access to payee information, and linking of activities to companies. New functionality to improve communication between program staff and finance regarding project incentive checks.
- Upstream application releases to support integration of reports submitted by weatherization and low-income THU partner agencies, improve CCHP product validation, add new products, and include project pre-approvals for the Home Performance with ENERGY STAR program.
- Development and release of a self-service administration tool for the screening application program interface.
- ISO-FCM certificate updates to exclude FLM and Tier III measures from ISO-NE FCM reporting.
- Revisions to support the Find a Pro or Retailer tool, VGS and BED online rebate submission emails, and Online Rebate Center.
- Development and release of a new product list management application for DesignLights Consortium lighting and ENERGY STAR qualified product list ingest and search.
- System updates to include non-energy GHG reduction tracking on custom HVAC measures.
- Updates to the contractor portal applications to address technical debt and to retire the correspondence Application Program Interface.

5.6.2 Utility Data Management

Efficiency Vermont:

- Continued communication and support activities to acquire utility data securely from Vermont's 16 participating electric distribution utilities and one participating gas utility (VGS).
- Performed ongoing maintenance of custom data integration and staging packages to ingest billing data from Vermont's electric distribution utilities on a quarterly, monthly, and weekly basis to the tracker utility database.
- Continued communication and support activities with multiple Vermont municipal utilities and their vendors to acquire new billing data transfer files conforming to the billing data standard agreement established in Docket No. 8316.
- Completed development, testing, and final deployment of new billing data integration packages to conform to the new billing data standard and protocols agreement established in Docket No. 8316 with VPPSA for Barton Village Electric Department, Village of Jacksonville Electric Department, and Village of Johnson Electric Department.
- Performed secure server upgrade support and follow-up with all the electric distribution utilities leveraging this server for billing and AMI data transfer.
- Began billing file migration activities with Hardwick Electric Department, Orleans Electric Department, Ludlow Electric Department, and Swanton Electric Department.
- Completed EEC changes in staging packages and ingest for the following electric distribution utilities: GMP, Stowe Electric Department, VEC, Barton Electric, Village of Jackson Electric Department, Village of Johnson Electric Department, and Ludlow Electric Department. Kicked off this work with WEC.
- Undertook internal data support activities and external electric distribution utility outreach related to the July 1 effective change requiring electric distribution utilities to bill net metering customers the EEC charge based on their gross (rather than net) consumption level.

5.6.3 Reporting and Business Intelligence

Data storage, management, and access provided critical support for EEU operations. As the volume of data and number of business software applications continued to grow in 2021, so did the need to provide scaled data systems, architecture, and reporting to support this growth. Efficiency Vermont:

- Designed, developed, and deployed new reports to support the shift to the 2021 reporting year and three-year (2021–2023) performance period. Deployed several new QPI progress and operational dashboard reports for actuals to target tracking.
- Designed, developed, and deployed new dashboard and supplemental detail reports to support the shift to new savings and incentive forecast tracking process.
- Updated over 100 existing reports with new data fields and table structures as a result of major changes in the tracker vendor voucher software application and Efficiency Vermont reporting warehouse and redeployed these reports prior to the vendor voucher software release.

- Updated the suite of Efficiency Vermont self-service business intelligence tools to support new forecasting processes. These tools were also heavily impacted by the vendor voucher database changes and software application release.
- Undertook design, development, testing, and deployment of changes in Efficiency Vermont reporting warehouse infrastructure and self-service business intelligence tools to support new 2021–2023 performance metrics and future internal tracking / reporting needs. This included new GHG and flexible load kW fields to Efficiency Vermont's project tracking database and reporting warehouse.
- Continued business intelligence and reporting support for the Home Performance with ENERGY STAR program shift to a prescriptive model leveraging the Online Rebate Center platform.
- Created new reports and updated existing contact details and history report to include new visualizations and charts to better assist with monitoring the partners Efficiency Vermont engages with, in order to ensure equity and inclusion among the partners.
- Supported multiple data export requests and developed a new dashboard report for Efficiency Vermont's 2021 Outreach Day engagement and tracking. Supported new dashboard scoping and development for new business needs related to Outreach Day activities. Deployed an Outreach Day impact report allowing Efficiency Vermont managers and staff to observe key results and trends of staff outreach efforts.
- Developed and deployed a new retail DIY report to evaluate the impact and performance of the retail DIY program in 2021, with a goal of gaining insights into whether customers continue their energy journey after obtaining a retail DIY rebate.
- Instituted new 2021 upstream HVAC program tracking changes and report updates.
- Supported reporting for the existing homes retrofit program and made major updates to three related reports.
- Implemented residential new construction report changes to accommodate changing program needs.
- Moved data from the custom measure analysis tool to Efficiency Vermont's reporting warehouse to provide Efficiency Vermont staff better visibility into anticipated savings and incentives for active offers.
- Created two midstream program dashboards and consolidated and retired 7 existing midstream reports.
- Collaborated with customer support staff to build a new interactive Power BI Voice of the Customer report.

6. RESOURCE ACQUISITION AND DEVELOPMENT AND SUPPORT SERVICES RESULTS

The tables presented in this section contain information on results from both Resource Acquisition and Development and Support Services activity, as well as a summary of Service Quality and Reliability.

6.1 Resource Acquisition Summary

Resource Acquisition Category	Total Efficiency Vermont Resource Acquisition	Thermal Energy and Process Fuels Resource Acquisition	Electric Resource Acquisition
Efficiency Vermont Costs			
Year to Date Costs	$44,922,758	$7,096,948	$37,825,810
Annual Budget Estimate[1]	$48,167,043	$7,118,317	$41,048,726
Unspent Annual Budget Estimate	$3,244,285	$21,370	$3,222,916
% Annual Budget Estimate Unspent	6.7%	0.3%	7.9%
MWh Savings Results			
MWh Year to Date	71,377	-146	71,523
MWh Cumulative starting 1/1/21	71,377	-146	71,523
Winter Peak Coincident kW Savings Results			
Winter Coincident Peak kW Year to Date	11,015	8	11,007
Winter Coincident Peak kW Cumulative Starting 1/1/21	11,015	8	11,007
Summer Peak Coincident kW Savings Results			
Summer Coincident Peak kW Year to Date	7,852	-25	7,876
Summer Coincident Peak kW Cumulative Starting 1/1/21	7,852	-25	7,876
Total Resource Benefits (TRB) Savings Results			
TRB Year to Date	$112,938,456	$39,984,437	$72,954,019
TRB Cumulative Starting 1/1/21	$112,938,456	$39,984,437	$72,954,019
MMBtu Savings Results			
MMBtu Year to Date	161,441	136,306	25,135
MMBtu Cumulative Starting 1/1/21	161,441	136,306	25,135
MWh Lifetime Savings Results			
MWh Lifetime Year to Date	945,824	-3,432	949,256
MWh Lifetime Cumulative Starting 1/1/21	945,824	-3,432	949,256
Greenhouse Gas (GHG) Savings Results			
GHG Reductions (metric tons CO2e) Year to Date	49,033	7,539	41,494
GHG Reductions (metric tons CO2e) Starting 1/1/21	49,033	7,539	41,494

[1] Annual budgets are estimates only and provided for informational purposes.

6.2 Budget Summary

	Budget 2021	Actual 2021	%	Budget 2021-2023	Actual 2021-2023	%
RESOURCE ACQUISITION						
Electric Efficiency Funds Activities						
Business Sector	$ 21,174,162	$ 19,273,726	91%	$ 61,843,592	$ 19,273,726	31%
Energy Savings Account Pilot	$ 2,000,000	$ 373,081	19%	$ 6,000,000	$ 373,081	6%
Residential Sector	$ 17,354,428	$ 17,680,126	102%	$ 53,742,178	$ 17,680,126	33%
Total Electric Efficiency Funds Activities	**$ 40,528,590**	**$ 37,326,933**	**92%**	**$ 121,585,770**	**$ 37,326,933**	**31%**
Thermal Energy and Process Fuels Funds Activities						
Business Sector	$ 1,755,875	$ 962,182	55%	$ 5,267,625	$ 962,182	18%
Residential Sector	$ 5,267,625	$ 6,040,233	115%	$ 15,802,875	$ 6,040,233	38%
Total Thermal Energy and Process Fuels Funds Activities	**$ 7,023,500**	**$ 7,002,415**	**100%**	**$ 21,070,500**	**$ 7,002,415**	**33%**
TOTAL RESOURCE ACQUISITION	**$ 47,552,090**	**$ 44,329,349**	**93%**	**$ 142,656,270**	**$ 44,329,349**	**31%**
DEVELOPMENT & SUPPORT SERVICES						
Education and Training	$ 482,700	$ 475,625	99%	$ 1,425,300	$ 475,625	33%
Applied Research and Development	$ 174,100	$ 171,164	98%	$ 522,300	$ 171,164	33%
Planning and Reporting	$ 375,800	$ 333,329	89%	$ 1,730,800	$ 333,329	19%
Evaluation, Measurement, and Verification	$ 493,600	$ 400,375	81%	$ 1,468,900	$ 400,375	27%
Administration and Regulatory Affairs	$ 618,200	$ 647,153	105%	$ 1,645,700	$ 647,153	39%
Information Systems	$ 1,351,333	$ 1,172,112	87%	$ 4,054,400	$ 1,172,112	29%
TOTAL DEVELOPMENT & SUPPORT SERVICES	**$ 3,495,733**	**$ 3,199,757**	**92%**	**$ 10,847,400**	**$ 3,199,757**	**29%**
Operations Fee (1.35%)	$ 662,146	$ 636,606	96%	$ 1,523,563	$ 636,606	42%
Sub-Total Prior to Performance-Based Compensation	**$ 51,709,968**	**$ 48,165,712**	**93%**	**$ 155,027,233**	**$ 48,165,712**	**31%**
Performance-Based Compensation (3.65%)	$ 1,790,246	$ -	0%	$ 5,851,600	$ -	0%
Total Efficiency Vermont	**$ 53,500,214**	**$ 48,165,712**	**90%**	**$ 160,878,833**	**$ 48,165,712**	**30%**

[1] Annual budgets are provided for information purposes only. Efficiency Vermont operates under three-year Commission approved budgets.

In accordance with both statutory and Vermont Public Utility Commission requirements, the funding source for Efficiency Vermont's electric efficiency services was separate and distinct from funding sources for efficiency services related to thermal energy and process fuels (TEPF). Electric services were funded through the Energy Efficiency Charge, whereas TEPF services were funded by Vermont's Regional Greenhouse Gas Initiative revenues and by revenues earned from meeting electric capacity commitments (Efficiency Vermont demand savings) bid into the regional grid's Forward Capacity Market (FCM). The Efficiency Vermont administrator—the Vermont Energy Investment Corporation—bid these expected demand savings into the FCM on behalf of the State of Vermont. 2021 FCM activities are discussed in Section 5.3.4.

6.3 Electric Performance Indicators & Minimum Requirements

QPI#	Title	Performance Indicator / Milestone	Target	Status	%
1	Total Resource Benefits	Present value of lifetime electric, fuel, and water benefits	$223,860,700	$72,954,019	33%
2	Annual Electricity Savings	Annual incremental net MWh savings	263,900	71,523	27%
3	Statewide Summer Peak Demand Savings	Cumulative net summer peak demand (kW) savings	28,400	7,876	28%
4	Statewide Winter Peak Demand Savings	Cumulative net winter peak demand (kW) savings	35,500	11,007	31%
5	Lifetime Electricity Savings	Lifetime incremental net MWh savings	3,302,400	949,256	29%
6	Greenhouse Gas Reduction	Energy and non-energy benefits, in metric tons of CO_2e	140,200	41,494	30%
7	Flexible Load	Annual kW of flexible load (controllable load)	2,700	1,197	44%
8	Administrative Efficiency	5% administrative cost reduction	$988,600	$309,910	31%

MPR#	Title	Minimum Requirement	Minimum	Status	%
9	Minimum Electric Benefits	Total electric benefits divided by total costs	1.2	1.3	109%
10	Threshold (or minimum acceptable) Level of Participation by Residential Customers	Total residential sector spending	$37,989,000	$17,918,808	47%
11	Threshold (or minimum acceptable) Level of Participation by Low-Income Households	Total low-income services spending	$11,480,000	$4,087,042	36%
12	Threshold (or minimum acceptable) Level of Participation by Small Business Customers	Number of total non-residential premises with annual electric use of 40,000 kWh/yr or less that acquire kwh savings	2,000	2,607	130%
13	Geographic Equity - County	TRB for each geographic area is greater than values shown on Geo-Equity County table	12	0	0%
14	Geographic Equity - Utility	Customer Lifetime Savings for each distribution utility is greater than values shown on Geo-Equity Utility table (VPPSA aggregated)	6	3	50%
15	Service Quality	Achieve 92 or more metric points	92	28	30%
16	Resource Acquisition- Performance Period Spending	Total spending for a three-year performance period (including applicable operations fees) is less than threshold	$124,004,000	$37,825,810	31%
17	Development and Support Services- Performance Period Spending	Total spending for a three-year performance period (including applicable operations fees) is less than threshold	$11,071,000	$3,242,954	29%

6.4 Electric Minimum TRB per Geographic Area (MPR #13)

Geographic Area[1]	Required TRB per Geographic Area[2]	Period To Date TRB per Geographic Area	% of Goal
Addison	$8,449,527	$4,260,349	50%
Bennington	$9,887,504	$3,866,278	39%
Caledonia	$6,768,863	$2,317,714	34%
Chittenden	$49,009,127	$18,011,201	37%
Essex/Orleans	$7,111,633	$3,786,732	53%
Franklin	$13,888,276	$5,150,687	37%
Grand Isle/Lamoille	$7,758,080	$3,869,745	50%
Orange	$5,043,007	$2,510,538	50%
Rutland	$16,797,004	$8,849,044	53%
Washington	$13,359,417	$9,639,398	72%
Windham	$14,974,353	$3,798,997	25%
Windsor	$13,941,791	$6,893,335	49%
Total	**$166,988,583**	**$72,954,019**	**44%**

[1] All geographic names above refer to Vermont Counties.

[2] Required Total Resource Benefits (TRB) targets have been adjusted for SMEEP

6.5 Electric Minimum Customer Lifetime Savings per Distribution Utility (MPR #14)

Distribution Utility	% EEC by Utility[1]	Minimum Lifetime Customer Savings[2] per Utility	Period To Date Lifetime Customer Savings per Utility	% of Goal
VPPSA Aggregate[3]	7.70%	$10,782,391	$8,201,647	76%
Barton Village Electric Department	0.30%	$420,093	$394,698	94%
Enosburg Falls Inc. Water & Light Department	0.60%	$840,186	$586,359	70%
Hardwick Electric Department	0.80%	$1,120,248	$1,024,427	91%
Ludlow Electric Light Department	1.10%	$1,540,342	$1,213,258	79%
Lyndonville Electric Department	1.40%	$1,960,435	$1,369,936	70%
Swanton Village Electric Department	1.20%	$1,680,373	$908,114	54%
Town of Northfield Electric Department	0.60%	$840,186	$441,312	53%
Village of Jacksonville Electric Department	0.10%	$140,031	$101,012	72%
Village of Johnson Electric Department	0.30%	$420,093	$293,409	70%
Village of Morrisville Water & Light Department	1.00%	$1,400,311	$1,629,326	116%
Village of Orleans	0.30%	$420,093	$239,795	57%
Green Mountain Power	79.00%	$110,624,536	$119,584,877	108%
Stowe Electric Department	1.70%	$2,380,528	$2,480,221	104%
Vermont Electric Co-op	9.70%	$13,583,013	$12,146,408	89%
Village of Hyde Park	0.20%	$280,062	$325,358	116%
Washington Electric Co-op	1.70%	$2,380,528	$2,278,924	96%
Total		**$140,031,058**	**N/A**	**N/A**

[1] % EEC by Utility is the average percent contributed by ratepayers in each distribution utility for the period 2016-2018 per the annual December reports issued by the Fiscal Agent

[2] Minimum Lifetime Customer Savings values are the sum of customer electric, water and fuel cost savings at DPS approved retail rate averages over the lifetime of the efficiency measures

[3] Minimum Lifetime Customer Savings for VPPSA is an aggregate target for all VPPSA members.

6.6 Thermal Energy and Process Fuels Funds
Performance Indicators & Minimum Requirements

QPI#	Title	Performance Indicator / Milestone	Target	Status	%
1	Thermal & Mechanical Energy Efficiency Savings	Annual incremental net MMBtu savings	340,600	136,306	40%
2	Residential Single Family Comprehensiveness	Combined performance for metrics 2.a.-2.c.	100%	92%	92%
		a. Average air leakage reduction per comprehensive project.	34%	29%	85%
		b. Percent of comprehensive projects with square feet of added insulation at least 50% of the home's finished square feet of floor area.	44%	46%	105%
		c. Percent of households (premises) that implement shell measures, and also have a heating system measures installed within three years of the shell measure.	16%	14%	86%
3	Housing Units Weatherized	Number of Residential Housing Units comprehensively weatherized.	4,400	1,225	28%
4	Greenhouse Gas Reductions	Energy and non-energy benefits, in metric tons CO_2e	20,400	7,539	37%

MPR#	Title	Minimum Requirement	Minimum	Status	%
5	Threshold (or minimum acceptable) Level of Participation by Residential Customers	Residential sector spending as % of total 2021-2023 spending	62.5%	86.3%	138%
6	Threshold (or minimum acceptable) Level of Participation by Low-Income Households	Low-income single- and multi-family spending as % of total 2021-2023 spending	17.0%	22.1%	130%
7	Performance Period Spending	Total 2021-2023 spending (including applicable operations fees) is less than threshold	$21,500,000	$7,096,948	33%

6.7 Service Quality and Reliability Summary Report

Metric #	Metric Description	Reporting Frequency	Performance this Period	Points Earned this Period	Cumulative 2021-2023 Points Earned	Total Possible 2021-2023 Points	Points Earned % of Total Possible
1	Residential Customer Service Satisfaction: Percentage of Residential Customers who contact Efficiency Vermont and are satisfied or very satisfied with Efficiency Vermont Customer Service will be greater than or equal to 80%	performance period	86.0%	0	0	12	0%
2	Business Customer Service Satisfaction: Percentage of Business Customers who contact Efficiency Vermont and are satisfied or very satisfied with Efficiency Vermont Customer Service will be greater than or equal to 80%	performance period	92.9%	0	0	12	0%
3	Customer Satisfaction upon Project Completion: Per each market segment, annual percentage of survey respondents with average service ratings of 3 (or better) shall be ≥ 90%	annually	96.0%	4	4	12	33%
4	Average answer time shall be ≤ 15 seconds per call	quarterly	7.0	1	4	12	33%
5	Average percentage of calls answered shall be ≥ 85%	quarterly	94.8%	1	4	12	33%
6	Average percentage of abandoned calls shall be ≤ 3%	quarterly	1.9%	1	4	12	33%
7	Percentage of complaint follow-up call attempted by end of next business day shall be ≥ 95%	quarterly	100.0%	1	4	12	33%
8	Percentage of complaints closed within 12 business days of initial complaint call shall be ≥ 95%	quarterly	100.0%	1	4	12	33%
9	For each reporting year, the ratio of total complaints received per total number of Efficiency Vermont participants shall be ≤ 0.5% (one-half of one percent)	annually	0.01%	4	4	12	33%
	Totals			**13**	**28**	**108**	**26%**

6.8 Electric Resource Acquisition Summary

	Totals			Business Energy Services			Residential Energy Services		
Services	Total Electric Efficiency Services	Subtotal Business Efficiency Services	Subtotal Residential Efficiency Services	New Construction	Existing Facilities	Energy Savings Account Pilot	New Construction	Efficient Products	Existing Homes
Electric Resource Acquisiton Costs									
Year to Date Costs	$37,825,810	$19,907,003	$17,918,807	$2,137,500	$17,396,422	$373,081	$2,867,826	$10,227,375	$4,823,607
Annual Budget Estimate[1]	$41,048,726	$23,460,013	$17,588,713	$2,470,384	$18,989,629	$2,000,000	$3,076,008	$9,903,528	$4,609,177
Unspent Annual Budget Estimate	$3,222,916	$3,553,010	($330,095)	$332,884	$1,593,208	$1,626,919	$208,182	($323,847)	($214,430)
% Annual Budget Estimate Unspent	8%	15%	-2%	13%	8%	81%	7%	-3%	-5%
MWh Savings Results									
MWh Year to Date	71,523	43,590	27,933	3,875	39,716	0	1,789	24,066	2,078
MWh Starting 1/1/21	71,523	43,590	27,933	3,875	39,716	0	1,789	24,066	2,078
3-Year MWh Goal	263,900	175,700	88,200	10,100	165,600	N/A	5,800	70,300	12,100
% of 3-Year MWh Goal	27%	25%	32%	38%	24%	N/A	31%	34%	17%
Winter Peak Coincident kW Savings Results									
Winter Coincident Peak kW Year to Date	11,007	5,203	5,804	601	4,602	0	317	5,026	461
Winter Coincident Peak kW Starting 1/1/21	11,007	5,203	5,804	601	4,602	0	317	5,026	461
3-Year Winter Coincident Peak kW Goal	35,500	20,400	15,100	1,200	19,200	N/A	900	12,400	1,800
% of 3-Year Winter Coincident Peak kW Goal	31%	26%	38%	50%	24%	N/A	35%	41%	26%
Summer Peak Coincident kW Savings Results									
Summer Coincident Peak kW Year to Date	7,876	5,995	1,881	619	5,376	0	107	1,641	134
Summer Coincident Peak kW Starting 1/1/21	7,876	5,995	1,881	619	5,376	0	107	1,641	134
3-Year Summer Coincident Peak kW Goal	28,400	21,300	7,100	1,500	19,800	N/A	300	6,200	600
% of 3-Year Summer Coincident Peak kW Goal	28%	28%	26%	41%	27%	N/A	36%	26%	22%
Total Resource Benefits (TRB) Savings Results									
TRB Year to Date	$72,954,019	40,545,398	$32,408,621	$6,607,272	$33,938,126	0	$4,214,338	$26,400,867	$1,793,416
TRB Starting 1/1/21	$72,954,019	40,545,398	$32,408,621	$6,607,272	$33,938,126	0	$4,214,338	$26,400,867	$1,793,416
3-Year TRB Goal	$223,860,700	$149,750,300	$74,110,400	$8,908,100	$140,842,200	N/A	$20,728,800	$46,767,500	$6,614,100
% of 3-Year TRB Goal	33%	27%	44%	74%	24%	N/A	20%	56%	27%
MWh Lifetime Savings Results									
MWh Lifetime Year to Date	949,256	567,221	382,035	65,687	501,534	0	31,321	322,174	28,540
MWh Lifetime Starting 1/1/21	949,256	567,221	382,035	65,687	501,534	0	31,321	322,174	28,540
3-Year MWh Lifetime Goal	3,302,400	2,280,600	1,021,800	133,600	2,147,000	N/A	104,100	827,700	90,000
% of 3-Year MWh Lifetime Goal	29%	25%	37%	49%	23%	N/A	30%	39%	32%
Greenhouse Gas (GHG) Savings Results									
GHG Reductions (metric tons CO2e) Year to Date	41,494	27,995	13,499	2,151	25,845	0	1,187	11,371	941
GHG Reductions (metric tons CO2e) Starting 1/1/21	41,494	27,995	13,499	2,151	25,845	0	1,187	11,371	941
3-Year GHG Goal	140,200	98,600	41,600	4,600	94,000	N/A	4,800	31,200	5,600
% of 3-Year GHG Goal	61%	28%	32%	47%	27%	N/A	25%	36%	17%

[1] Annual budgets are provided for information purposes only. Efficiency Vermont operates under three-year Commission approved budgets.

6.9 Electric Resource Acquisition

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21	Cumulative starting 1/1/12
# participants with installations	52,910	37,441	37,441	666,879
Operating Costs				
Administration	$2,598,591	$2,288,648	$2,288,648	$28,397,190
Programs and Implementation	$4,810,129	$4,244,319	$4,244,319	$47,569,841
Strategy and Planning	$809,393	$427,393	$427,393	$11,798,419
Subtotal Operating Costs	**$8,218,113**	**$6,960,360**	**$6,960,360**	**$87,765,450**
Technical Assistance Costs				
Services to Participants	$6,239,272	$6,185,670	$6,185,670	$56,856,752
Services to Trade Allies	$1,111,040	$1,186,366	$1,186,366	$10,786,503
Subtotal Technical Assistance Costs	**$7,350,312**	**$7,372,036**	**$7,372,036**	**$67,643,255**
Support Services				
Consulting	$93,064	$77,417	$77,417	$2,484,828
Customer Support	$97,100	$84,474	$84,474	$1,834,162
Data and Technical Services	$604,937	$863,146	$863,146	$4,387,811
Information Technology	$0	$0	$0	$124,017
Marketing	$2,385,074	$3,614,054	$3,614,054	$22,175,348
Policy & Public Affairs	$0	$0	$0	$293,640
Other	$0	$0	$0	$106,873
Subtotal Support Services Costs	**$3,180,174**	**$4,639,091**	**$4,639,091**	**$31,406,678**
Incentive Costs				
Incentives to Participants	$21,758,406	$18,658,359	$18,658,359	$210,225,003
Incentives to Trade Allies	$926,918	$195,964	$195,964	$2,381,445
Subtotal Incentive Costs	**$22,685,324**	**$18,854,323**	**$18,854,323**	**$212,606,448**
Total Efficiency Vermont Costs	**$41,433,925**	**$37,825,810**	**$37,825,810**	**$399,421,831**
Total Participant Costs	$21,598,202	$22,020,901	$22,020,901	$219,039,294
Total Third Party Costs	$131,627	$69,822	$69,822	$3,362,615
Total Resource Acquisition Costs	**$63,163,753**	**$59,916,533**	**$59,916,533**	**$621,823,740**

Annualized MWh Savings	99,607	71,523	71,523	1,104,567
Lifetime MWh Savings	1,077,374	949,256	949,253	12,024,457
TRB Savings (2021 $)	$82,359,871	$72,954,019	$72,954,019	$1,080,774,410
Winter Coincident Peak kW Savings	15,436	11,007	11,007	194,661
Summer Coincident Peak kW Savings	11,529	7,876	7,876	132,042
GHG Reductions (metric tons CO_2e)	N/A	41,494	41,494	41,494
Annualized MWh Savings/Participant	1.883	1.910	1.910	1.656
Weighted Lifetime	10.8	13.3	13.3	10.9

Annualized MWh Savings (adjusted for measure life)	966,586
Winter Coincident Peak kW Savings (adjusted for measure life)	162,443
Summer Coincident Peak kW Savings (adjusted for measure life)	113,551

6.10 Electric Resource Acquisition - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	2,116	3,482	1,596	57,545	278	579	923	$3,946,956	$545,773	$631,667
Behavior	3	393	176	738	7	7	0	$38,533	$5,000	$254
Cooking and Laundry	1,951	1,992	995	24,677	271	212	1,789	$3,837,806	$617,008	$1,103,578
Design Assistance	314	366	222	3,614	38	36	2,253	$642,925	$2,091,361	$1,454,865
Electronics	13	4	2	19	0	0	0	$933	$2,306	-$2,306
Hot Water Efficiency	2,544	4,529	1,658	54,142	697	353	-6,761	$1,897,484	$1,232,877	$364,424
Industrial Process	73	5,244	2,477	48,857	585	588	2,376	$4,051,446	$676,837	$1,126,176
Lighting	18,971	27,637	11,517	354,334	4,184	4,150	-10,448	$21,457,102	$3,931,460	$6,186,255
Motors	1,825	3,383	1,547	43,936	470	438	749	$2,992,853	$591,286	$860,147
Other Efficiency	4,603	3,559	2,581	46,618	780	255	15,369	$10,924,230	$1,615,432	-$606,437
Other Indirect Activity	290	0	0	0	0	0	0	$0	$999,413	-$623,499
Refrigeration	2,807	7,215	11,723	90,420	756	702	6,638	$7,276,586	$1,700,370	$2,008,922
Space Heat Efficiency	9,105	12,494	6,163	209,541	2,774	338	7,504	$13,491,449	$4,011,456	$8,767,809
Space Heat Fuel Switch	4	-13	20	-232	-2	0	132	$99,372	$1,402	$32,466
Ventilation	1,747	1,237	819	15,047	168	217	4,609	$2,226,608	$263,098	$714,740
Water Conservation	297	0	0	0	0	0	0	$69,737	$200	$1,839
Totals		71,523	41,494	949,256	11,007	7,876	25,135	$72,954,019	$18,285,279	$22,020,901

6.11 Electric Resource Acquisition - Utility Breakdown

Utility	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Barton	325	187	85	2,466	33	17	27	$179,030	$56,315	$35,203
Burlington	119	60	29	769	9	7	32	$82,774	$194,710	-$153,709
Enosburg Falls	142	281	138	3,805	40	36	223	$315,780	$78,572	$112,146
Green Mountain	29,719	59,517	34,591	790,376	9,061	6,597	18,701	$59,839,691	$14,906,870	$18,740,432
Hardwick	331	411	186	6,410	67	34	80	$460,519	$181,372	$29,633
Hyde Park	131	139	67	1,874	26	16	74	$167,058	$39,216	$33,687
Jacksonville	87	39	20	539	8	3	33	$51,843	$15,022	$7,990
Johnson	72	113	61	1,567	18	13	169	$193,102	$26,921	$72,890
Ludlow	382	582	508	7,795	106	70	448	$660,106	$142,026	$157,790
Lyndonville	448	643	449	8,974	95	78	235	$703,125	$256,453	$133,245
Morrisville	500	806	351	11,072	126	101	-88	$769,727	$188,842	$209,661
Northfield	117	262	117	2,805	39	37	8	$224,031	$61,396	$30,152
Off Grid	1	0	0	0	0	0	0	$0	$0	$0
Orleans	52	105	48	1,719	23	7	20	$112,844	$25,283	$27,600
Stowe	499	1,119	641	15,163	186	102	978	$1,363,532	$218,835	$481,509
Swanton	251	536	288	6,191	88	68	-19	$453,563	$197,794	$138,354
VT Electric Coop	3,356	5,690	3,442	74,461	896	588	4,018	$6,299,988	$1,418,281	$1,773,649
Washington Electric	909	1,031	474	13,270	187	104	196	$1,077,305	$277,371	$190,669
Totals	37,441	71,523	41,494	949,256	11,007	7,876	25,135	$72,954,019	$18,285,279	$22,020,901

6.12 Electric Resource Acquisition - County Breakdown

County	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Addison	2,358	4,881	2,918	63,893	788	492	374	$4,260,349	$1,114,077	$1,771,961
Bennington	2,486	4,429	2,211	53,930	738	460	610	$3,866,278	$1,182,888	$1,461,153
Caledonia	1,354	2,324	1,206	32,815	406	266	452	$2,317,714	$854,322	$491,026
Chittenden	9,588	17,587	10,280	237,379	2,639	2,057	6,083	$18,011,201	$4,008,201	$5,804,808
Essex	199	234	105	3,114	39	27	9	$229,377	$85,687	$35,210
Franklin	2,211	5,124	2,429	70,751	717	600	1,377	$5,150,687	$1,248,218	$1,363,118
Grand Isle	533	618	300	8,729	127	41	399	$695,485	$203,490	$255,690
Lamoille	1,639	2,884	1,442	39,222	471	286	1,249	$3,174,259	$646,885	$1,066,734
Orange	1,272	2,832	1,688	34,134	429	432	-297	$2,510,538	$777,080	$617,301
Orleans	1,787	3,270	2,283	41,803	466	358	2,928	$3,557,356	$786,710	$935,260
Rutland	5,377	8,706	4,639	111,285	1,256	925	2,609	$8,849,044	$1,984,327	$2,442,133
Washington	3,593	8,241	5,529	117,259	1,223	959	4,090	$9,639,398	$2,265,509	$2,311,267
Windham	2,167	4,758	2,744	56,241	775	400	380	$3,798,997	$1,528,372	$1,498,302
Windsor	2,877	5,637	3,721	78,701	931	575	4,870	$6,893,335	$1,599,513	$1,966,939
Totals	37,441	71,523	41,494	949,256	11,007	7,876	25,135	$72,954,019	$18,285,279	$22,020,901

6.13 Electric Resource Acquisition Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	$57,442,510
Fossil Fuel Savings (Costs)	$436,814	$7,774,610
Water Savings (Costs)	$350,474	$7,736,565
Total	**$787,287**	**$72,954,019**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**66,673**	**62,936**	**71,523**
Winter on peak	25,873	24,449	28,068
Winter off peak	21,848	20,578	23,109
Summer on peak	10,583	10,003	11,504
Summer off peak	8,369	7,905	8,846
Coincident Demand Savings (kW)			
Winter	10,415	9,889	11,007
Shoulder	0	0	0
Summer	7,475	7,083	7,876

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**93,624**	**81,506**	**1,050,578**
Annualized fuel savings (increase) MMBtu Total	**28,418**	**25,135**	**391,229**
LP	21,298	18,891	272,880
NG	8,669	8,632	153,619
Oil/Kerosene	(2,605)	(3,033)	(38,453)
Wood	(357)	(664)	(11,818)
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**$527,173**	**$516,047**	**$6,911,091**

Net Societal Benefits	**$67,308,412**

6.14 Electric Business Energy Services Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	8,446	6,512	6,512
Operating Costs			
Administration	$1,193,183	$1,187,780	$1,187,780
Programs and Implementation	$2,154,612	$1,766,507	$1,766,507
Strategy and Planning	$546,445	$258,287	$258,287
Subtotal Operating Costs	**$3,894,240**	**$3,212,573**	**$3,212,573**
Technical Assistance Costs			
Services to Participants	$4,613,684	$4,535,508	$4,535,508
Services to Trade Allies	$856,301	$804,349	$804,349
Subtotal Technical Assistance Costs	**$5,469,985**	**$5,339,857**	**$5,339,857**
Support Services			
Consulting	$72,689	$62,896	$62,896
Customer Support	$45,532	$35,191	$35,191
Data and Technical Services	$494,157	$627,680	$627,680
Information Technology	$0	$0	$0
Marketing	$1,401,802	$1,272,611	$1,272,611
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$2,014,181**	**$1,998,379**	**$1,998,379**
Incentive Costs			
Incentives to Participants	$9,292,242	$9,239,664	$9,239,664
Incentives to Trade Allies	$512,109	$116,529	$116,529
Subtotal Incentive Costs	**$9,804,351**	**$9,356,193**	**$9,356,193**
Total Efficiency Vermont Costs	**$21,182,758**	**$19,907,003**	**$19,907,003**
Total Participant Costs	$14,220,154	$14,178,292	$14,178,292
Total Third Party Costs	$15,200	$0	$0
Total Resource Acquisition Costs	**$35,418,112**	**$34,085,295**	**$34,085,295**
Annualized MWh Savings	65,264	43,590	43,590
Lifetime MWh Savings	699,480	567,221	567,218
TRB Savings (2021 $)	$53,971,132	$40,545,398	$40,545,398
Winter Coincident Peak kW Savings	7,608	5,203	5,203
Summer Coincident Peak kW Savings	9,022	5,995	5,995
GHG Reductions (metric tons CO_2e)	N/A	27,995	27,995
Annualized MWh Savings/Participant	7.727	6.694	6.694
Weighted Lifetime	10.7	13.0	13.0

6.15 Electric Business Energy Services - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	69	2,342	1,094	45,628	221	331	923	$3,048,405	$274,445	$395,139
Behavior	3	393	176	738	7	7	0	$38,533	$5,000	$254
Cooking and Laundry	40	182	83	2,347	23	28	38	$242,313	$39,822	$10,232
Design Assistance	161	366	222	3,614	38	36	2,253	$642,925	$2,045,015	$1,455,252
Hot Water Efficiency	82	202	104	2,409	31	16	225	$260,752	$76,305	$30,509
Industrial Process	73	5,244	2,477	48,857	585	588	2,376	$4,051,446	$676,837	$1,126,176
Lighting	5,138	22,191	9,104	294,147	2,684	3,696	-10,350	$17,971,332	$2,545,163	$6,056,648
Motors	69	2,883	1,324	34,703	391	394	749	$2,497,391	$351,831	$532,395
Other Efficiency	187	23	10	681	4	2	0	$36,844	$273,290	$71,348
Other Indirect Activity	52	0	0	0	0	0	0	$0	$907,131	-$563,032
Refrigeration	460	6,323	11,324	80,223	674	599	6,638	$6,652,099	$914,260	$2,197,583
Space Heat Efficiency	774	2,426	1,404	42,366	413	98	2,921	$3,248,699	$574,088	$2,385,085
Space Heat Fuel Switch	4	-13	20	-232	-2	0	132	$99,372	$1,402	$32,466
Ventilation	67	1,029	653	11,741	133	199	3,486	$1,730,330	$181,795	$448,237
Water Conservation	4	0	0	0	0	0	0	$24,957	$200	$1
Totals		43,590	27,995	567,221	5,203	5,995	9,394	$40,545,398	$8,866,583	$14,178,292

6.16 Electric Residential Energy Services Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	44,464	30,929	30,929
Operating Costs			
Administration	$1,405,408	$1,100,868	$1,100,868
Programs and Implementation	$2,655,516	$2,477,812	$2,477,812
Strategy and Planning	$262,948	$169,106	$169,106
Subtotal Operating Costs	**$4,323,873**	**$3,747,787**	**$3,747,787**
Technical Assistance Costs			
Services to Participants	$1,625,588	$1,650,162	$1,650,162
Services to Trade Allies	$254,739	$382,017	$382,017
Subtotal Technical Assistance Costs	**$1,880,328**	**$2,032,179**	**$2,032,179**
Support Services			
Consulting	$20,375	$14,520	$14,520
Customer Support	$51,567	$49,282	$49,282
Data and Technical Services	$110,779	$235,466	$235,466
Information Technology	$0	$0	$0
Marketing	$983,272	$2,341,443	$2,341,443
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$1,165,993**	**$2,640,712**	**$2,640,712**
Incentive Costs			
Incentives to Participants	$12,466,164	$9,418,695	$9,418,695
Incentives to Trade Allies	$414,809	$79,435	$79,435
Subtotal Incentive Costs	**$12,880,973**	**$9,498,130**	**$9,498,130**
Total Efficiency Vermont Costs	**$20,251,167**	**$17,918,807**	**$17,918,807**
Total Participant Costs	$7,378,048	$7,842,609	$7,842,609
Total Third Party Costs	$116,427	$69,822	$69,822
Total Resource Acquisition Costs	**$27,745,642**	**$25,831,238**	**$25,831,238**
Annualized MWh Savings	34,343	27,933	27,933
Lifetime MWh Savings	377,894	382,035	382,035
TRB Savings (2021 $)	$28,388,739	$32,408,621	$32,408,621
Winter Coincident Peak kW Savings	7,827	5,804	5,804
Summer Coincident Peak kW Savings	2,507	1,881	1,881
GHG Reductions (metric tons CO_2e)	N/A	13,499	13,499
Annualized MWh Savings/Participant	0.772	0.903	0.903
Weighted Lifetime	11.0	13.7	13.7

6.17 Electric Residential Energy Services - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	2,047	1,140	502	11,917	57	248	0	$898,551	$271,328	$236,528
Cooking and Laundry	1,911	1,809	912	22,330	248	184	1,751	$3,595,492	$577,186	$1,093,346
Design Assistance	153	0	0	0	0	0	0	$0	$46,346	-$386
Electronics	13	4	2	19	0	0	0	$933	$2,306	-$2,306
Hot Water Efficiency	2,462	4,327	1,553	51,733	666	337	-6,986	$1,636,732	$1,156,572	$333,915
Lighting	13,833	5,447	2,413	60,188	1,500	454	-98	$3,485,770	$1,386,297	$129,607
Motors	1,756	500	223	9,234	78	44	0	$495,462	$239,455	$327,752
Other Efficiency	4,416	3,537	2,571	45,937	776	254	15,369	$10,887,386	$1,342,142	-$677,785
Other Indirect Activity	238	0	0	0	0	0	0	$0	$92,282	-$60,467
Refrigeration	2,347	892	399	10,197	82	102	0	$624,487	$786,110	-$188,661
Space Heat Efficiency	8,331	10,068	4,759	167,175	2,362	240	4,583	$10,242,750	$3,437,368	$6,382,724
Ventilation	1,680	208	165	3,305	36	18	1,123	$496,278	$81,303	$266,503
Water Conservation	293	0	0	0	0	0	0	$44,780	$0	$1,838
Totals		27,933	13,499	382,035	5,804	1,881	15,741	$32,408,621	$9,418,695	$7,842,609

6.18 Thermal Energy and Process Fuels Resource Acquisition Summary

	Totals			Business Energy Services		Residential Energy Services		
Services	Total Thermal Energy and Process Fuels Efficiency Services	Subtotal Business Efficiency Services	Subtotal Residential Efficiency Services	New Construction	Existing Facilities	New Construction[2]	Efficient Products	Existing Homes
Costs								
Year to Date Costs	$7,096,948	$975,171	$6,121,776	$0	$975,171	$19	$1,373,608	$4,748,150
Annual Budget Estimate[1]	$7,118,317	$1,779,579	$5,338,738	$0	$1,779,579	$0	$698,859	$4,639,879
Unspent Annual Budget Estimate	$21,370	$804,408	($783,038)	($0)	$804,408	($19)	($674,749)	($108,271)
% Annual Budget Estimate Unspent	0%	45%	-15%	0%	45%	0%	-97%	-2%
Savings Results								
MMBtu Year to Date	136,306	49,596	86,710	-	49,596	-	65,426	21,284
MMBtu Cumulative starting 1/1/21	136,306	49,596	86,710	-	49,596	-	65,426	21,284
3-Year MMBtu Goal	340,600	194,100	146,500	N/A	194,100	N/A	88,100	58,400
% of 3-Year MMBtu Goal	40%	26%	59%	N/A	26%	N/A	74%	36%
Associated Electric Benefits								
MWh Year to Date	(146)	(63)	(83)	-	(63)	-	60	(143)
MWh Cumulative starting 1/1/21	(146)	(63)	(83)	-	(63)	-	60	(143)
Winter Coincident Peak kW Year to Date	8	(3)	11	0	(3)	0	34	(22)
Winter Coincident Peak kW Cumulative starting 1/1/21	8	(3)	11	0	(3)	0	34	(22)
Summer Coincident Peak kW Year to Date	(25)	(22)	(3)	0	(22)	0	(2)	(1)
Summer Coincident Peak kW Cumulative starting 1/1/21	(25)	(22)	(3)	0	(22)	0	(2)	(1)
TRB Year-to-Date	$39,984,437	$12,762,049	$27,222,388	$0	$12,762,049	$0	$18,074,044	$9,148,343
TRB Starting 1/1/21	$39,984,437	$12,762,049	$27,222,388	$0	$12,762,049	$0	$18,074,044	$9,148,343
Lifetime MWh Year to Date	(3,432)	(2,236)	(1,196)	-	(2,236)	-	1,191	(2,387)
Lifetime MWh Cumulative starting 1/1/21	(3,432)	(2,236)	(1,196)	-	(2,236)	-	1,191	(2,387)
GHG Reductions (metric tons CO2e) Year to Date	7,539	3,125	4,413	0	3,125	0	3,172	1,241
GHG Reductions (metric tons CO2e) Starting 1/1/21	7,539	3,125	4,413	0	3,125	0	3,172	1,241

[1] Annual budgets are provided for information purposes only. Efficiency Vermont operates under three-year Commission approved budgets.

[2] Costs reported for Residential New Construction were mis-coded. A correcting entry will be made in 2022.

6.19 Thermal Energy and Process Fuels Resource Acquisition

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	4,291	4,611	4,611
Operating Costs			
Administration	$583,765	$534,417	$534,417
Programs and Implementation	$1,422,132	$923,074	$923,074
Strategy and Planning	$72,252	$6,266	$6,266
Subtotal Operating Costs	**$2,078,150**	**$1,463,757**	**$1,463,757**
Technical Assistance Costs			
Services to Participants	$452,114	$303,894	$303,894
Services to Trade Allies	$14,771	$14,595	$14,595
Subtotal Technical Assistance Costs	**$466,885**	**$318,489**	**$318,489**
Support Services			
Consulting	$6,374	$2,963	$2,963
Customer Support	$34,231	$22,480	$22,480
Data and Technical Services	$102,728	$63,301	$63,301
Information Technology	$0	$0	$0
Marketing	$355,976	$250,569	$250,569
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$499,309**	**$339,314**	**$339,314**
Incentive Costs			
Incentives to Participants	$5,332,936	$4,773,638	$4,773,638
Incentives to Trade Allies	$237,350	$201,750	$201,750
Subtotal Incentive Costs	**$5,570,286**	**$4,975,388**	**$4,975,388**
Total Efficiency Vermont Costs	**$8,614,630**	**$7,096,948**	**$7,096,948**
Total Participant Costs	$11,389,954	$15,243,022	$15,243,022
Total Third Party Costs	$168,726	$476,797	$476,797
Total Resource Acquisition Costs	**$20,173,309**	**$22,816,766**	**$22,816,766**
Annualized MMBtu Savings	92,049	136,306	136,306
Lifetime MMBtu Savings	1,430,509	2,175,198	2,175,198
TRB Savings (2021 $)	$20,212,695	$39,984,437	$39,984,437
GHG Reductions (metric tons CO_2e)	N/A	7,539	7,539
Annualized MMBtu Savings/Participant	21.452	29.561	29.561
Weighted Lifetime	15.5	16.0	16.0

6.20 Thermal Energy and Process Fuels Services & Initiatives - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Cooking and Laundry	52	1	141	2	0	0	2,228	$808,503	$57,306	$41,547
Design Assistance	12	4	127	43	0	0	1,757	$354,831	$58,700	$302,765
Hot Water Efficiency	203	-102	79	-1,227	-16	-8	1,788	$470,560	$72,441	$44,330
Hot Water Fuel Switch	2	11	43	341	2	1	599	$347,416	$7,610	$40,827
Industrial Process	24	-19	374	-192	-2	-2	7,130	$2,369,017	$56,300	$687,908
Motors	1	36	140	538	1	4	1,694	$475,426	$14,134	$14,931
Other Efficiency	937	0	0	0	0	0	0	$0	$1,540	-$1,540
Other Fuel Switch	4	-81	28	-2,431	0	-25	932	$200,905	$6,000	$46,682
Other Indirect Activity	119	0	0	0	0	0	0	$0	$660,307	-$601,006
Space Heat Efficiency	3,287	39	2,655	225	8	7	63,663	$13,763,126	$2,744,973	$8,768,653
Space Heat Fuel Switch	1,066	-37	3,929	-749	15	-2	56,217	$21,113,390	$1,090,992	$5,741,160
Ventilation	41	2	22	17	0	0	298	$81,264	$3,334	$156,767
Totals		-146	7,539	-3,432	8	-25	136,306	$39,984,437	$4,773,638	$15,243,022

6.21 Thermal Energy and Process Fuels Resource Acquisition
Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	($251,218)
Fossil Fuel Savings (Costs)	$2,176,201	$40,192,602
Water Savings (Costs)	$4,814	$43,051
Total	**$2,181,015**	**$39,984,436**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**(111)**	**(128)**	**(146)**
Winter on peak	(80)	(84)	(96)
Winter off peak	(8)	(21)	(23)
Summer on peak	(26)	(25)	(28)
Summer off peak	3	2	2
Coincident Demand Savings (kW)			
Winter	16	7	8
Shoulder	0	0	0
Summer	(24)	(22)	(25)

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**1,236**	**1,119**	**4,630**
Annualized fuel savings (increase) MMBtu Total	**154,500**	**136,306**	**2,175,198**
LP	29,011	25,821	442,437
NG	23	20	408
Oil/Kerosene	91,551	77,947	1,292,233
Wood	27,901	27,167	369,442
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**($148,732)**	**($121,250)**	**($2,200,453)**

Net Societal Benefits	$38,393,753

6.22 Thermal Energy and Process Fuels
Business Energy Services Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	182	186	186
Operating Costs			
Administration	$83,368	$80,188	$80,188
Programs and Implementation	$27,066	$8,895	$8,895
Strategy and Planning	$6,027	$0	$0
Subtotal Operating Costs	**$116,461**	**$89,084**	**$89,084**
Technical Assistance Costs			
Services to Participants	$130,113	$118,731	$118,731
Services to Trade Allies	$520	$67	$67
Subtotal Technical Assistance Costs	**$130,633**	**$118,798**	**$118,798**
Support Services			
Consulting	$2,761	$2,338	$2,338
Customer Support	$672	$215	$215
Data and Technical Services	$27,671	$21,813	$21,813
Information Technology	$0	$0	$0
Marketing	$749	$22	$22
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$31,853**	**$24,388**	**$24,388**
Incentive Costs			
Incentives to Participants	$801,964	$739,102	$739,102
Incentives to Trade Allies	$5,000	$3,800	$3,800
Subtotal Incentive Costs	**$806,964**	**$742,902**	**$742,902**
Total Efficiency Vermont Costs	**$1,085,910**	**$975,171**	**$975,171**
Total Participant Costs	$3,965,614	$3,094,335	$3,094,335
Total Third Party Costs	$19,228	$165,413	$165,413
Total Resource Acquisition Costs	**$5,070,753**	**$4,234,919**	**$4,234,919**
Annualized MMBtu Savings	35,799	49,596	49,596
Lifetime MMBtu Savings	508,411	704,520	704,520
TRB Savings (2021 $)	$7,881,092	$12,762,049	$12,762,049
GHG Reductions (metric tons CO_2e)	N/A	3,125	3,125
Annualized MMBtu Savings/Participant	196.699	266.644	266.644
Weighted Lifetime	14.2	14.2	14.2

6.23 Thermal Energy and Process Fuels Business Energy Services - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Cooking and Laundry	52	1	141	2	0	0	2,228	$808,503	$57,306	$41,547
Design Assistance	12	4	127	43	0	0	1,757	$354,831	$58,700	$302,765
Hot Water Efficiency	5	-3	19	-35	0	0	291	$66,971	$8,575	$17,561
Hot Water Fuel Switch	1	0	38	0	0	0	601	$330,015	$7,610	$38,291
Industrial Process	24	-19	374	-192	-2	-2	7,130	$2,369,017	$56,300	$687,908
Motors	1	36	140	538	1	4	1,694	$475,426	$14,134	$14,931
Other Efficiency	19	0	0	0	0	0	0	$0	$0	$0
Other Fuel Switch	4	-81	28	-2,431	0	-25	932	$200,905	$6,000	$46,682
Other Indirect Activity	5	0	0	0	0	0	0	$0	$98,535	-$39,234
Space Heat Efficiency	80	15	1,379	253	1	1	22,775	$4,272,130	$234,221	$917,188
Space Heat Fuel Switch	11	-18	866	-436	-3	0	12,006	$3,841,024	$194,892	$1,046,397
Ventilation	2	2	14	20	0	0	182	$43,228	$2,829	$20,301
Totals		-63	3,125	-2,236	-3	-22	49,596	$12,762,049	$739,102	$3,094,335

6.24 Thermal Energy and Process Fuels
Residential Energy Services Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	4,109	4,425	4,425
Operating Costs			
Administration	$500,397	$454,228	$454,228
Programs and Implementation	$1,395,066	$914,179	$914,179
Strategy and Planning	$66,225	$6,266	$6,266
Subtotal Operating Costs	**$1,961,689**	**$1,374,673**	**$1,374,673**
Technical Assistance Costs			
Services to Participants	$322,001	$185,162	$185,162
Services to Trade Allies	$14,251	$14,528	$14,528
Subtotal Technical Assistance Costs	**$336,252**	**$199,691**	**$199,691**
Support Services			
Consulting	$3,613	$625	$625
Customer Support	$33,560	$22,266	$22,266
Data and Technical Services	$75,057	$41,488	$41,488
Information Technology	$0	$0	$0
Marketing	$355,227	$250,548	$250,548
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$467,456**	**$314,926**	**$314,926**
Incentive Costs			
Incentives to Participants	$4,530,972	$4,034,536	$4,034,536
Incentives to Trade Allies	$232,350	$197,950	$197,950
Subtotal Incentive Costs	**$4,763,322**	**$4,232,486**	**$4,232,486**
Total Efficiency Vermont Costs	**$7,528,719**	**$6,121,776**	**$6,121,776**
Total Participant Costs	$7,424,339	$12,148,686	$12,148,686
Total Third Party Costs	$149,498	$311,384	$311,384
Total Resource Acquisition Costs	**$15,102,557**	**$18,581,846**	**$18,581,846**
Annualized MMBtu Savings	56,250	86,710	86,710
Lifetime MMBtu Savings	922,098	1,470,677	1,470,677
TRB Savings (2018 $)	$12,331,603	$27,222,388	$27,222,388
GHG Reductions (metric tons CO_2e)	N/A	4,413	4,413
Annualized MMBtu Savings/Participant	13.689	19.596	19.596
Weighted Lifetime	16.4	17.0	17.0

6.25 Thermal Energy and Process Fuels Residential Energy Services - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Hot Water Efficiency	198	-99	60	-1,192	-15	-8	1,497	$403,588	$63,866	$26,769
Hot Water Fuel Switch	1	11	5	341	2	1	-2	$17,401	$0	$2,536
Other Efficiency	918	0	0	0	0	0	0	$0	$1,540	-$1,540
Other Indirect Activity	114	0	0	0	0	0	0	$0	$561,772	-$561,772
Space Heat Efficiency	3,207	24	1,277	-29	6	6	40,888	$9,490,996	$2,510,752	$7,851,465
Space Heat Fuel Switch	1,055	-19	3,063	-313	18	-2	44,211	$17,272,366	$896,100	$4,694,763
Ventilation	39	0	8	-3	0	0	116	$38,036	$506	$136,466
Totals		-83	4,413	-1,196	11	-3	86,710	$27,222,388	$4,034,536	$12,148,686

7. MAJOR MARKET RESOURCE ACQUISITION RESULTS

7.1 Electric Business New Construction Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	47	57	57
Operating Costs			
Administration	$88,942	$110,332	$110,332
Programs and Implementation	$220,405	$217,937	$217,937
Strategy and Planning	$52,871	$36,832	$36,832
Subtotal Operating Costs	**$362,218**	**$365,101**	**$365,101**
Technical Assistance Costs			
Services to Participants	$563,123	$689,058	$689,058
Services to Trade Allies	$72,480	$102,905	$102,905
Subtotal Technical Assistance Costs	**$635,603**	**$791,963**	**$791,963**
Support Services			
Consulting	$8,555	$7,501	$7,501
Customer Support	$5,497	$4,506	$4,506
Data and Technical Services	$41,875	$77,088	$77,088
Information Technology	$0	$0	$0
Marketing	$139,596	$183,053	$183,053
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$195,522**	**$272,148**	**$272,148**
Incentive Costs			
Incentives to Participants	$665,836	$708,288	$708,288
Incentives to Trade Allies	$0	$0	$0
Subtotal Incentive Costs	**$665,836**	**$708,288**	**$708,288**
Total Efficiency Vermont Costs	**$1,859,179**	**$2,137,500**	**$2,137,500**
Total Participant Costs	$1,160,841	$1,553,969	$1,553,969
Total Third Party Costs	$0	$0	$0
Total Resource Acquisition Costs	**$3,020,020**	**$3,691,469**	**$3,691,469**
Annualized MWh Savings	4,230	3,875	3,875
Lifetime MWh Savings	64,545	65,687	65,687
TRB Savings (2021 $)	$5,339,697	$6,607,272	$6,607,272
Winter Coincident Peak kW Savings	534	601	601
Summer Coincident Peak kW Savings	587	619	619
GHG Reductions (metric tons CO_2e)	1,891	2,151	2,151
Annualized MWh Savings/Participant	89.999	67.975	67.975
Weighted Lifetime	15.3	17.0	17.0

7.2 Electric Business New Construction - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	19	1,167	517	25,542	196	222	0	$1,775,878	$123,877	$90,427
Behavior	1	3	1	3	0	0	0	$190	$0	$3
Cooking and Laundry	7	13	7	173	2	2	19	$31,685	$8,609	-$2,295
Design Assistance	9	5	2	53	0	0	0	$2,640	$65,081	$177,012
Hot Water Efficiency	8	5	11	72	1	0	140	$68,761	$19,959	-$10,226
Industrial Process	2	27	99	421	8	8	1,382	$801,802	$6,800	$69,472
Lighting	34	1,435	607	20,741	223	270	-551	$1,354,834	$204,594	$253,949
Motors	9	295	152	4,329	10	21	392	$336,874	$15,227	$60,002
Other Efficiency	2	0	0	0	0	0	0	$0	$17,875	$8,565
Other Indirect Activity	2	0	0	0	0	0	0	$0	$6,100	-$3,790
Refrigeration	12	396	298	5,370	39	43	0	$326,846	$38,831	$72,474
Space Heat Efficiency	37	299	255	5,974	46	9	2,062	$1,156,979	$145,830	$535,905
Space Heat Fuel Switch	3	-13	20	-232	-2	0	132	$99,372	$1,402	$32,466
Ventilation	34	242	182	3,241	78	44	1,185	$648,759	$53,901	$270,005
Water Conservation	2	0	0	0	0	0	0	$2,653	$200	$0
Totals		3,875	2,151	65,687	601	619	4,761	$6,607,272	$708,288	$1,553,969

7.3 Electric Business New Construction Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	$4,422,632
Fossil Fuel Savings (Costs)	$66,875	$2,133,439
Water Savings (Costs)	$2,396	$51,202
Total	**$69,271**	**$6,607,272**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**3,415**	**3,409**	**3,875**
Winter on peak	1,310	1,307	1,500
Winter off peak	1,050	1,048	1,177
Summer on peak	590	589	677
Summer off peak	466	465	521
Coincident Demand Savings (kW)			
Winter	542	540	601
Shoulder	0	0	0
Summer	559	557	619

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**560**	**557**	**5,700**
Annualized fuel savings (increase) MMBtu Total	**4,764**	**4,761**	**84,077**
LP	3,984	3,933	71,008
NG	206	206	4,256
Oil/Kerosene	707	707	11,415
Wood	(133)	(85)	(2,602)
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**$2,753**	**$2,776**	**$37,795**

Net Societal Benefits	$6,467,980

7.4 Electric Business Existing Facilities Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	8,399	6,455	6,455
Operating Costs			
Administration	$1,104,241	$1,077,448	$1,077,448
Programs and Implementation	$1,934,208	$1,548,570	$1,548,570
Strategy and Planning	$493,574	$221,455	$221,455
Subtotal Operating Costs	**$3,532,023**	**$2,847,472**	**$2,847,472**
Technical Assistance Costs			
Services to Participants	$4,050,561	$3,846,450	$3,846,450
Services to Trade Allies	$783,821	$701,444	$701,444
Subtotal Technical Assistance Costs	**$4,834,381**	**$4,547,894**	**$4,547,894**
Support Services			
Consulting	$64,134	$55,395	$55,395
Customer Support	$40,036	$30,685	$30,685
Data and Technical Services	$452,283	$550,593	$550,593
Information Technology	$0	$0	$0
Marketing	$1,262,207	$1,089,558	$1,089,558
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$1,818,659**	**$1,726,231**	**$1,726,231**
Incentive Costs			
Incentives to Participants	$8,626,406	$8,531,377	$8,531,377
Incentives to Trade Allies	$512,109	$116,529	$116,529
Subtotal Incentive Costs	**$9,138,515**	**$8,647,906**	**$8,647,906**
Total Efficiency Vermont Costs	**$19,323,579**	**$17,769,503**	**$17,769,503**
Total Participant Costs	$13,059,313	$12,624,323	$12,624,323
Total Third Party Costs	$15,200	$0	$0
Total Resource Acquisition Costs	**$32,398,091**	**$30,393,826**	**$30,393,826**
Annualized MWh Savings	61,034	39,716	39,716
Lifetime MWh Savings	634,935	501,534	501,531
TRB Savings (2021 $)	$48,631,435	$33,938,126	$33,938,126
Winter Coincident Peak kW Savings	7,075	4,602	4,602
Summer Coincident Peak kW Savings	8,436	5,376	5,376
GHG Reductions (metric tons CO_2e)	25,493	25,845	25,845
Annualized MWh Savings/Participant	7.267	6.153	6.153
Weighted Lifetime	10.4	12.6	12.6

7.5 Electric Business Existing Facilities - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	50	1,175	578	20,086	26	110	923	$1,272,526	$150,567	$304,712
Behavior	2	390	174	735	7	7	0	$38,343	$5,000	$251
Cooking and Laundry	33	169	76	2,174	21	26	19	$210,628	$31,213	$12,527
Design Assistance	152	360	220	3,561	38	36	2,253	$640,285	$1,979,934	$1,278,240
Hot Water Efficiency	74	197	93	2,337	31	16	85	$191,991	$56,347	$40,734
Industrial Process	71	5,217	2,378	48,437	577	580	994	$3,249,643	$670,037	$1,056,704
Lighting	5,104	20,755	8,497	273,405	2,460	3,426	-9,799	$16,616,498	$2,340,569	$5,802,699
Motors	60	2,587	1,172	30,374	382	373	357	$2,160,517	$336,603	$472,393
Other Efficiency	185	23	10	681	4	2	0	$36,844	$255,415	$62,783
Other Indirect Activity	50	0	0	0	0	0	0	$0	$901,031	-$559,242
Refrigeration	448	5,928	11,026	74,853	635	556	6,638	$6,325,253	$875,429	$2,125,109
Space Heat Efficiency	737	2,127	1,149	36,392	366	89	859	$2,091,720	$428,258	$1,849,180
Space Heat Fuel Switch	1	0	0	0	0	0	0	$0	$0	$0
Ventilation	33	787	472	8,500	55	155	2,301	$1,081,572	$127,893	$178,232
Water Conservation	2	0	0	0	0	0	0	$22,304	$0	$1
Totals		39,716	25,845	501,534	4,602	5,376	4,633	$33,938,126	$8,158,296	$12,624,323

7.6 Electric Business Existing Facilities Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	$32,567,017
Fossil Fuel Savings (Costs)	$43,757	$1,205,962
Water Savings (Costs)	$7,255	$164,749
Total	**$51,012**	**$33,937,728**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**37,159**	**34,923**	**39,716**
Winter on peak	14,446	13,593	15,604
Winter off peak	10,725	10,045	11,281
Summer on peak	6,949	6,549	7,531
Summer off peak	5,039	4,737	5,301
Coincident Demand Savings (kW)			
Winter	4,390	4,134	4,602
Shoulder	0	0	0
Summer	5,117	4,834	5,376

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**1,830**	**1,687**	**18,781**
Annualized fuel savings (increase) MMBtu Total	**5,570**	**4,633**	**36,205**
LP	6,538	6,032	68,504
NG	1,949	1,819	24,385
Oil/Kerosene	(5,808)	(5,825)	(84,337)
Wood	1,479	1,298	12,652
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**$378,665**	**$367,376**	**$5,176,798**

Net Societal Benefits	**$32,260,545**

7.7 Electric Residential New Construction Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	586	745	745
Operating Costs			
Administration	$142,370	$163,810	$163,810
Programs and Implementation	$464,054	$200,270	$200,270
Strategy and Planning	$61,340	$28,250	$28,250
Subtotal Operating Costs	**$667,764**	**$392,330**	**$392,330**
Technical Assistance Costs			
Services to Participants	$1,086,636	$854,691	$854,691
Services to Trade Allies	$48,515	$47,075	$47,075
Subtotal Technical Assistance Costs	**$1,135,151**	**$901,766**	**$901,766**
Support Services			
Consulting	$17,067	$10,891	$10,891
Customer Support	$7,045	$5,802	$5,802
Data and Technical Services	$26,766	$44,980	$44,980
Information Technology	$0	$0	$0
Marketing	$154,938	$165,175	$165,175
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$205,816**	**$226,848**	**$226,848**
Incentive Costs			
Incentives to Participants	$1,132,968	$1,346,882	$1,346,882
Incentives to Trade Allies	$0	$0	$0
Subtotal Incentive Costs	**$1,132,968**	**$1,346,882**	**$1,346,882**
Total Efficiency Vermont Costs	**$3,141,699**	**$2,867,826**	**$2,867,826**
Total Participant Costs	$321,183	$462,223	$462,223
Total Third Party Costs	$7,200	$44,000	$44,000
Total Resource Acquisition Costs	**$3,470,083**	**$3,374,048**	**$3,374,048**
Annualized MWh Savings	1,017	1,789	1,789
Lifetime MWh Savings	16,118	31,321	31,321
TRB Savings (2021 $)	$2,750,129	$4,214,338	$4,214,338
Winter Coincident Peak kW Savings	178	317	317
Summer Coincident Peak kW Savings	74	107	107
GHG Reductions (metric tons CO_2e)	820	1,187	1,187
Annualized MWh Savings/Participant	1.735	2.401	2.401
Weighted Lifetime	15.9	17.5	17.5

7.8 Electric Residential New Construction - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	48	22	10	332	0	1	0	$15,595	$215	$27,520
Cooking and Laundry	581	40	24	527	11	7	110	$133,332	$111,342	-$63,689
Design Assistance	93	0	0	0	0	0	0	$0	$34,346	-$386
Hot Water Efficiency	366	26	72	271	3	2	1,000	$457,485	$45,847	-$25,206
Lighting	545	656	287	7,705	104	67	-77	$444,100	$322,437	-$87,543
Refrigeration	490	24	11	403	2	3	0	$23,806	$142,217	-$136,469
Space Heat Efficiency	540	852	637	19,465	168	16	4,557	$2,646,155	$652,774	$522,091
Ventilation	557	168	148	2,618	29	11	1,123	$449,085	$37,704	$224,067
Water Conservation	293	0	0	0	0	0	0	$44,780	$0	$1,838
Totals		1,789	1,187	31,321	317	107	6,714	$4,214,338	$1,346,882	$462,223

7.9 Electric Residential New Construction Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	$1,642,705
Fossil Fuel Savings (Costs)	$108,078	$2,255,584
Water Savings (Costs)	$13,505	$316,054
Total	**$121,584**	**$4,214,342**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**1,567**	**1,577**	**1,789**
Winter on peak	577	582	668
Winter off peak	703	710	797
Summer on peak	138	138	158
Summer off peak	149	147	165
Coincident Demand Savings (kW)			
Winter	283	285	317
Shoulder	0	0	0
Summer	96	96	107

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**3,243**	**3,141**	**36,011**
Annualized fuel savings (increase) MMBtu Total	**6,573**	**6,714**	**143,488**
LP	1,897	1,937	38,957
NG	3,854	3,950	90,519
Oil/Kerosene	774	776	12,753
Wood	48	50	1,259
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**$22,809**	**$22,917**	**$276,895**

Net Societal Benefits	$3,482,225

7.10 Electric Efficient Products Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	40,567	26,218	26,218
Operating Costs			
Administration	$985,908	$742,452	$742,452
Programs and Implementation	$862,378	$944,484	$944,484
Strategy and Planning	$101,100	$83,261	$83,261
Subtotal Operating Costs	**$1,949,386**	**$1,770,197**	**$1,770,197**
Technical Assistance Costs			
Services to Participants	$224,956	$375,567	$375,567
Services to Trade Allies	$120,305	$177,332	$177,332
Subtotal Technical Assistance Costs	**$345,261**	**$552,899**	**$552,899**
Support Services			
Consulting	$758	$2,022	$2,022
Customer Support	$19,301	$18,074	$18,074
Data and Technical Services	$41,374	$127,998	$127,998
Information Technology	$0	$0	$0
Marketing	$522,263	$1,695,209	$1,695,209
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$583,696**	**$1,843,303**	**$1,843,303**
Incentive Costs			
Incentives to Participants	$8,946,326	$5,991,341	$5,991,341
Incentives to Trade Allies	$387,631	$69,635	$69,635
Subtotal Incentive Costs	**$9,333,958**	**$6,060,976**	**$6,060,976**
Total Efficiency Vermont Costs	**$12,212,300**	**$10,227,375**	**$10,227,375**
Total Participant Costs	$7,008,986	$6,893,177	$6,893,177
Total Third Party Costs	$0	$0	$0
Total Resource Acquisition Costs	**$19,221,286**	**$17,120,552**	**$17,120,552**
Annualized MWh Savings	31,442	24,066	24,066
Lifetime MWh Savings	341,559	322,174	322,174
TRB Savings (2021 $)	$24,138,080	$26,400,867	$26,400,867
Winter Coincident Peak kW Savings	7,254	5,026	5,026
Summer Coincident Peak kW Savings	2,307	1,641	1,641
GHG Reductions (metric tons CO_2e)	13,116	11,371	11,371
Annualized MWh Savings/Participant	0.775	0.918	0.918
Weighted Lifetime	10.9	13.4	13.4

7.11 Electric Efficient Products - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	1,922	1,086	478	11,079	55	241	0	$848,974	$246,964	$187,790
Cooking and Laundry	1,218	1,664	839	21,299	222	167	1,613	$3,392,087	$365,516	$1,149,871
Electronics	13	4	2	19	0	0	0	$933	$2,306	-$2,306
Hot Water Efficiency	1,630	4,215	1,442	50,582	653	330	-8,011	$981,661	$1,102,700	$350,502
Lighting	11,786	4,194	1,861	47,306	1,223	341	-22	$2,740,498	$941,305	$182,188
Motors	1,756	500	223	9,234	78	44	0	$495,462	$239,455	$327,752
Other Efficiency	2,611	3,496	2,543	45,403	767	251	15,222	$10,780,303	$1,330,887	-$671,642
Other Indirect Activity	1	0	0	0	0	0	0	$0	$200	-$200
Refrigeration	1,189	541	244	7,998	50	62	0	$485,093	$213,045	-$42,722
Space Heat Efficiency	6,217	8,365	3,738	129,257	1,978	204	0	$6,675,856	$1,548,963	$5,411,943
Totals		24,066	11,371	322,174	5,026	1,641	8,802	$26,400,867	$5,991,341	$6,893,177

7.12 Electric Efficient Products Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	$17,309,380
Fossil Fuel Savings (Costs)	$213,133	$2,115,698
Water Savings (Costs)	$314,787	$6,975,844
Total	**$527,919**	**$26,400,922**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**22,646**	**21,196**	**24,066**
Winter on peak	8,821	8,271	9,496
Winter off peak	8,595	8,026	9,013
Summer on peak	2,712	2,538	2,918
Summer off peak	2,518	2,361	2,642
Coincident Demand Savings (kW)			
Winter	4,773	4,516	5,026
Shoulder	0	0	0
Summer	1,580	1,475	1,641

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**85,053**	**73,207**	**962,945**
Annualized fuel savings (increase) MMBtu Total	**11,280**	**8,802**	**124,137**
LP	8,756	6,870	92,682
NG	2,647	2,644	34,358
Oil/Kerosene	1,628	1,215	20,224
Wood	(1,751)	(1,927)	(23,127)
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**$116,757**	**$116,789**	**$1,359,338**

Net Societal Benefits	$26,333,670

7.13 Electric Existing Homes Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	3,311	3,966	3,966
Operating Costs			
Administration	$277,130	$194,606	$194,606
Programs and Implementation	$1,329,085	$1,333,058	$1,333,058
Strategy and Planning	$100,508	$57,596	$57,596
Subtotal Operating Costs	**$1,706,723**	**$1,585,260**	**$1,585,260**
Technical Assistance Costs			
Services to Participants	$313,997	$419,905	$419,905
Services to Trade Allies	$85,919	$157,610	$157,610
Subtotal Technical Assistance Costs	**$399,916**	**$577,514**	**$577,514**
Support Services			
Consulting	$2,549	$1,607	$1,607
Customer Support	$25,222	$25,406	$25,406
Data and Technical Services	$42,639	$62,488	$62,488
Information Technology	$0	$0	$0
Marketing	$306,071	$481,059	$481,059
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$376,482**	**$570,560**	**$570,560**
Incentive Costs			
Incentives to Participants	$2,386,869	$2,080,472	$2,080,472
Incentives to Trade Allies	$27,177	$9,800	$9,800
Subtotal Incentive Costs	**$2,414,047**	**$2,090,272**	**$2,090,272**
Total Efficiency Vermont Costs	**$4,897,167**	**$4,823,607**	**$4,823,607**
Total Participant Costs	$47,879	$487,209	$487,209
Total Third Party Costs	$109,227	$25,822	$25,822
Total Resource Acquisition Costs	**$5,054,273**	**$5,336,638**	**$5,336,638**
Annualized MWh Savings	1,884	2,078	2,078
Lifetime MWh Savings	20,216	28,540	28,540
TRB Savings (2021 $)	$1,500,530	$1,793,416	$1,793,416
Winter Coincident Peak kW Savings	395	461	461
Summer Coincident Peak kW Savings	126	134	134
GHG Reductions (metric tons CO_2e)	815	941	941
Annualized MWh Savings/Participant	0.569	0.524	0.524
Weighted Lifetime	10.7	13.7	13.7

7.14 Electric Existing Homes - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	77	31	14	507	1	6	0	$33,983	$24,149	$21,218
Cooking and Laundry	112	106	49	505	14	11	28	$70,073	$100,328	$7,165
Design Assistance	60	0	0	0	0	0	0	$0	$12,000	$0
Hot Water Efficiency	466	86	40	880	10	5	24	$197,586	$8,025	$8,619
Lighting	1,502	596	265	5,177	173	47	0	$301,172	$122,555	$34,962
Other Efficiency	1,805	40	27	534	9	3	147	$107,083	$11,255	-$6,143
Other Indirect Activity	237	0	0	0	0	0	0	$0	$92,082	-$60,267
Refrigeration	668	327	145	1,796	30	37	0	$115,589	$430,848	-$9,470
Space Heat Efficiency	1,574	852	384	18,454	216	19	26	$920,739	$1,235,631	$448,690
Ventilation	1,123	40	18	687	7	7	0	$47,193	$43,599	$42,436
Totals		2,078	941	28,540	461	134	225	$1,793,416	$2,080,473	$487,209

7.15 Electric Existing Homes Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	$1,500,776
Fossil Fuel Savings (Costs)	$4,970	$63,928
Water Savings (Costs)	$12,531	$228,717
Total	**$17,501**	**$1,793,421**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**1,886**	**1,831**	**2,078**
Winter on peak	719	696	799
Winter off peak	776	749	842
Summer on peak	194	191	220
Summer off peak	197	195	218
Coincident Demand Savings (kW)			
Winter	427	414	461
Shoulder	0	0	0
Summer	122	121	134

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**2,938**	**2,914**	**27,140**
Annualized fuel savings (increase) MMBtu Total	**231**	**225**	**3,323**
LP	122	119	1,730
NG	13	13	102
Oil/Kerosene	95	94	1,492
Wood	0	0	0
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**$6,188**	**$6,188**	**$60,266**

Net Societal Benefits	($1,236,009)

7.16 Thermal Energy and Process Fuels
Business New Construction Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	0	0	0
Operating Costs			
Administration	$0	$0	$0
Programs and Implementation	$0	$0	$0
Strategy and Planning	$0	$0	$0
Subtotal Operating Costs	**$0**	**$0**	**$0**
Technical Assistance Costs			
Services to Participants	$0	$0	$0
Services to Trade Allies	$0	$0	$0
Subtotal Technical Assistance Costs	**$0**	**$0**	**$0**
Support Services			
Consulting	$0	$0	$0
Customer Support	$0	$0	$0
Data and Technical Services	$0	$0	$0
Information Technology	$0	$0	$0
Marketing	$0	$0	$0
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$0**	**$0**	**$0**
Incentive Costs			
Incentives to Participants	$0	$0	$0
Incentives to Trade Allies	$0	$0	$0
Subtotal Incentive Costs	**$0**	**$0**	**$0**
Total Efficiency Vermont Costs	**$0**	**$0**	**$0**
Total Participant Costs	$0	$0	$0
Total Third Party Costs	$0	$0	$0
Total Resource Acquisition Costs	**$0**	**$0**	**$0**

Annualized MMBtu Savings	-	-	-
Lifetime MMBtu Savings	-	-	-
TRB Savings (2021 $)	$0	$0	$0
GHG Reductions (metric tons CO_2e)	-	-	-
Annualized MMBtu Savings/Participant	-	-	-
Weighted Lifetime	0.0	0.0	0.0

7.17 Thermal Energy and Process Fuels Business New Construction - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
	0	0	0	0	0	0	0	0	0	0
Totals		0	0	0	0	0	0	0	0	0

7.18 Thermal Energy and Process Fuels
Business New Construction Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	$0
Fossil Fuel Savings (Costs)	$0	$0
Water Savings (Costs)	$0	$0
Total	**$0**	**$0**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**0**	**0**	**0**
Winter on peak	0	0	0
Winter off peak	0	0	0
Summer on peak	0	0	0
Summer off peak	0	0	0
Coincident Demand Savings (kW)			
Winter	0	0	0
Shoulder	0	0	0
Summer	0	0	0

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**0**	**0**	**0**
Annualized fuel savings (increase) MMBtu Total	**0**	**0**	**0**
LP	0	0	0
NG	0	0	0
Oil/Kerosene	0	0	0
Wood	0	0	0
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**$0**	**$0**	**$0**

Net Societal Benefits	**($0)**

7.19 Thermal Energy and Process Fuels
Business Existing Facilities Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	182	186	186
Operating Costs			
Administration	$83,368	$80,188	$80,188
Programs and Implementation	$27,066	$8,895	$8,895
Strategy and Planning	$6,027	$0	$0
Subtotal Operating Costs	**$116,461**	**$89,084**	**$89,084**
Technical Assistance Costs			
Services to Participants	$130,113	$118,731	$118,731
Services to Trade Allies	$520	$67	$67
Subtotal Technical Assistance Costs	**$130,633**	**$118,798**	**$118,798**
Support Services			
Consulting	$2,761	$2,338	$2,338
Customer Support	$672	$215	$215
Data and Technical Services	$27,671	$21,813	$21,813
Information Technology	$0	$0	$0
Marketing	$749	$22	$22
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$31,853**	**$24,388**	**$24,388**
Incentive Costs			
Incentives to Participants	$801,964	$739,102	$739,102
Incentives to Trade Allies	$5,000	$3,800	$3,800
Subtotal Incentive Costs	**$806,964**	**$742,902**	**$742,902**
Total Efficiency Vermont Costs	**$1,085,910**	**$975,171**	**$975,171**
Total Participant Costs	$3,965,614	$3,094,335	$3,094,335
Total Third Party Costs	$19,228	$165,413	$165,413
Total Resource Acquisition Costs	**$5,070,753**	**$4,234,919**	**$4,234,919**
Annualized MMBtu Savings	35,799	49,596	49,596
Lifetime MMBtu Savings	508,411	704,520	704,520
TRB Savings (2021 $)	$7,881,092	$12,762,049	$12,762,049
GHG Reductions (metric tons CO_2e)	2,195	3,125	3,125
Annualized MMBtu Savings/Participant	196.699	266.644	266.644
Weighted Lifetime	14.2	14.2	14.2

7.20 Thermal Energy and Process Fuels Business Existing Facilities - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Cooking and Laundry	52	1	141	2	0	0	2,228	$808,503	$57,306	$41,547
Design Assistance	12	4	127	43	0	0	1,757	$354,831	$58,700	$302,765
Hot Water Efficiency	5	-3	19	-35	0	0	291	$66,971	$8,575	$17,561
Hot Water Fuel Switch	1	0	38	0	0	0	601	$330,015	$7,610	$38,291
Industrial Process	24	-19	374	-192	-2	-2	7,130	$2,369,017	$56,300	$687,908
Motors	1	36	140	538	1	4	1,694	$475,426	$14,134	$14,931
Other Efficiency	19	0	0	0	0	0	0	$0	$0	$0
Other Fuel Switch	4	-81	28	-2,431	0	-25	932	$200,905	$6,000	$46,682
Other Indirect Activity	5	0	0	0	0	0	0	$0	$98,535	-$39,234
Space Heat Efficiency	80	15	1,379	253	1	1	22,775	$4,272,130	$234,221	$917,188
Space Heat Fuel Switch	11	-18	866	-436	-3	0	12,006	$3,841,024	$194,892	$1,046,397
Ventilation	2	2	14	20	0	0	182	$43,228	$2,829	$20,301
Totals		-63	3,125	-2,236	-3	-22	49,596	$12,762,049	$739,102	$3,094,335

7.21 Thermal Energy and Process Fuels
Business Existing Facilities Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	($187,828)
Fossil Fuel Savings (Costs)	$649,766	$12,913,347
Water Savings (Costs)	$4,498	$36,530
Total	**$654,264**	**$12,762,049**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**(61)**	**(55)**	**(63)**
Winter on peak	(57)	(50)	(58)
Winter off peak	5	4	5
Summer on peak	(19)	(17)	(19)
Summer off peak	9	8	9
Coincident Demand Savings (kW)			
Winter	(3)	(3)	(3)
Shoulder	0	0	0
Summer	(22)	(20)	(22)

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**1,155**	**1,046**	**3,895**
Annualized fuel savings (increase) MMBtu Total	**56,981**	**49,596**	**704,520**
LP	9,067	8,332	129,026
NG	23	20	408
Oil/Kerosene	37,596	32,081	456,164
Wood	4,283	3,812	48,244
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**($1,508)**	**($1,205)**	**($24,729)**

Net Societal Benefits	**$15,293,963**

7.22 Thermal Energy and Process Fuels
Residential New Construction Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	2	0	0
Operating Costs			
Administration	$756	$0	$0
Programs and Implementation	$0	$0	$0
Strategy and Planning	$0	$0	$0
Subtotal Operating Costs	**$756**	**$0**	**$0**
Technical Assistance Costs			
Services to Participants	$476	$13	$13
Services to Trade Allies	$0	$0	$0
Subtotal Technical Assistance Costs	**$476**	**$13**	**$13**
Support Services			
Consulting	$0	$0	$0
Customer Support	$199	$6	$6
Data and Technical Services	$0	$0	$0
Information Technology	$0	$0	$0
Marketing	$291	$0	$0
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$490**	**$6**	**$6**
Incentive Costs			
Incentives to Participants	$7,500	$0	$0
Incentives to Trade Allies	$0	$0	$0
Subtotal Incentive Costs	**$7,500**	**$0**	**$0**
Total Efficiency Vermont Costs	**$9,222**	**$19**	**$19**
Total Participant Costs	($7,500)	$0	$0
Total Third Party Costs	$0	$0	$0
Total Resource Acquisition Costs	**$1,722**	**$19**	**$19**
Annualized MMBtu Savings	-	-	-
Lifetime MMBtu Savings	-	-	-
TRB Savings (2021 $)	$0	$0	$0
GHG Reductions (metric tons CO_2e)	-	-	-
Annualized MMBtuSavings/Participant	-	-	-
Weighted Lifetime	0.0	0.0	0.0

7.23 Thermal Energy and Process Fuels Residential New Construction - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
	0	0	0	0	0	0	0	0	0	0
Totals		0	0	0	0	0	0	0	0	0

7.24 Thermal Energy and Process Fuels
Residential New Construction Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	$0
Fossil Fuel Savings (Costs)	$0	$0
Water Savings (Costs)	$0	$0
Total	**$0**	**$0**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**0**	**0**	**0**
Winter on peak	0	0	0
Winter off peak	0	0	0
Summer on peak	0	0	0
Summer off peak	0	0	0
Coincident Demand Savings (kW)			
Winter	0	0	0
Shoulder	0	0	0
Summer	0	0	0

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**0**	**0**	**0**
Annualized fuel savings (increase) MMBtu Total	**0**	**0**	**0**
LP	0	0	0
NG	0	0	0
Oil/Kerosene	0	0	0
Wood	0	0	0
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**$0**	**$0**	**$0**

Net Societal Benefits	**($17)**

7.25 Thermal Energy and Process Fuels
Efficient Products Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	1,908	2,761	2,761
Operating Costs			
Administration	$75,312	$129,425	$129,425
Programs and Implementation	$17,841	$22,876	$22,876
Strategy and Planning	$2,648	$0	$0
Subtotal Operating Costs	**$95,800**	**$152,301**	**$152,301**
Technical Assistance Costs			
Services to Participants	$497	$79	$79
Services to Trade Allies	$228	$0	$0
Subtotal Technical Assistance Costs	**$725**	**$79**	**$79**
Support Services			
Consulting	$3	$0	$0
Customer Support	$76	$34	$34
Data and Technical Services	$3,565	$4,181	$4,181
Information Technology	$0	$0	$0
Marketing	$42	$126	$126
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$3,686**	**$4,341**	**$4,341**
Incentive Costs			
Incentives to Participants	$738,166	$1,216,887	$1,216,887
Incentives to Trade Allies	$0	$0	$0
Subtotal Incentive Costs	**$738,166**	**$1,216,887**	**$1,216,887**
Total Efficiency Vermont Costs	**$838,378**	**$1,373,608**	**$1,373,608**
Total Participant Costs	$2,305,316	$5,136,561	$5,136,561
Total Third Party Costs	$0	$0	$0
Total Resource Acquisition Costs	**$3,143,694**	**$6,510,169**	**$6,510,169**
Annualized MMBtu Savings	37,845	65,426	65,426
Lifetime MMBtu Savings	525,635	996,493	996,493
TRB Savings (2021 $)	6,754,477	$18,074,044	$18,074,044
GHG Reductions (metric tons CO_2e)	2,031	3,172	3,172
Annualized MMBtu Savings/Participant	19.835	23.697	23.697
Weighted Lifetime	13.9	15.2	15.2

7.26 Thermal Energy and Process Fuels Efficient Products - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Hot Water Efficiency	108	-92	45	-1,086	-14	-7	1,242	$337,845	$63,800	-$13,654
Other Efficiency	11	0	0	0	0	0	0	$0	$1,540	-$1,540
Space Heat Efficiency	1,752	24	485	-36	6	6	27,287	$3,136,431	$561,197	$2,309,988
Space Heat Fuel Switch	919	129	2,642	2,313	42	0	36,897	$14,599,768	$590,350	$2,841,767
Totals		60	3,172	1,191	34	-2	65,426	$18,074,044	$1,216,887	$5,136,561

7.27 Thermal Energy and Process Fuels
Efficient Products Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	$2,021	$55,005
Fossil Fuel Savings (Costs)	$1,122,866	$18,019,039
Water Savings (Costs)	$0	$0
Total	**$1,124,887**	**$18,074,044**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**89**	**54**	**60**
Winter on peak	36	21	24
Winter off peak	63	45	50
Summer on peak	(5)	(6)	(7)
Summer off peak	(5)	(6)	(6)
Coincident Demand Savings (kW)			
Winter	41	30	34
Shoulder	0	0	0
Summer	(1)	(1)	(2)

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**0**	**0**	**0**
Annualized fuel savings (increase) MMBtu Total	**74,538**	**65,426**	**996,493**
LP	14,278	12,267	190,832
NG	0	0	0
Oil/Kerosene	39,470	32,468	549,248
Wood	20,787	20,691	256,414
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**($138,265)**	**($112,780)**	**($2,030,040)**

Net Societal Benefits	**$19,483,746**

7.28 Thermal Energy and Process Fuels
Existing Homes Summary

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21
# participants with installations	2,199	1,664	1,664
Operating Costs			
Administration	$424,329	$324,803	$324,803
Programs and Implementation	$1,377,226	$891,303	$891,303
Strategy and Planning	$63,577	$6,266	$6,266
Subtotal Operating Costs	**$1,865,132**	**$1,222,372**	**$1,222,372**
Technical Assistance Costs			
Services to Participants	$321,028	$185,070	$185,070
Services to Trade Allies	$14,023	$14,528	$14,528
Subtotal Technical Assistance Costs	**$335,051**	**$199,598**	**$199,598**
Support Services			
Consulting	$3,610	$625	$625
Customer Support	$33,284	$22,226	$22,226
Data and Technical Services	$71,493	$37,306	$37,306
Information Technology	$0	$0	$0
Marketing	$354,893	$250,422	$250,422
Policy & Public Affairs	$0	$0	$0
Other	$0	$0	$0
Subtotal Support Services Costs	**$463,279**	**$310,579**	**$310,579**
Incentive Costs			
Incentives to Participants	$3,785,306	$2,817,650	$2,817,650
Incentives to Trade Allies	$232,350	$197,950	$197,950
Subtotal Incentive Costs	**$4,017,656**	**$3,015,600**	**$3,015,600**
Total Efficiency Vermont Costs	**$6,681,119**	**$4,748,150**	**$4,748,150**
Total Participant Costs	$5,126,523	$7,012,125	$7,012,125
Total Third Party Costs	$149,498	$311,384	$311,384
Total Resource Acquisition Costs	**$11,957,141**	**$12,071,658**	**$12,071,658**
Annualized MMBtu Savings	18,405	21,284	21,284
Lifetime MMBtu Savings	396,463	474,184	474,184
TRB Savings (2021 $)	$5,577,127	$9,148,343	$9,148,343
GHG Reductions (metric tons CO_2e)	922	1,241	1,241
Annualized MMBtu Savings/Participant	8.370	12.791	12.791
Weighted Lifetime	21.5	22.3	22.3

7.29 Thermal Energy and Process Fuels Existing Homes - End Use Breakdown

End Use	# of Participants	MWH Saved	GHG (metric tons CO2e) Saved	Lifetime MWH Saved	Winter KW Saved	Summer KW Saved	Fuel MMBTU Saved	TRB Saved	Participant Incentives Paid	Participant Costs
Hot Water Efficiency	90	-7	15	-106	-1	0	255	$65,744	$66	$40,423
Hot Water Fuel Switch	1	11	5	341	2	1	-2	$17,401	$0	$2,536
Other Efficiency	907	0	0	0	0	0	0	$0	$0	$0
Other Indirect Activity	114	0	0	0	0	0	0	$0	$561,772	-$561,772
Space Heat Efficiency	1,455	0	792	8	0	0	13,601	$6,354,565	$1,949,556	$5,541,476
Space Heat Fuel Switch	136	-148	421	-2,626	-23	-2	7,314	$2,672,598	$305,750	$1,852,996
Ventilation	39	0	8	-3	0	0	116	$38,036	$506	$136,466
Totals		-143	1,241	-2,387	-22	-1	21,284	$9,148,343	$2,817,650	$7,012,125

7.30 Thermal Energy and Process Fuels
Existing Homes Total Resource Benefits

Avoided Cost Benefits	2021	Lifetime (Present Value)
Avoided Cost of Electricity	nap	($118,395)
Fossil Fuel Savings (Costs)	$403,569	$9,260,217
Water Savings (Costs)	$316	$6,521
Total	**$403,885**	**$9,148,343**

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
Annualized Energy Savings (MWh): Total	**(139)**	**(127)**	**(143)**
Winter on peak	(60)	(54)	(62)
Winter off peak	(76)	(69)	(78)
Summer on peak	(2)	(2)	(2)
Summer off peak	(1)	(1)	(1)
Coincident Demand Savings (kW)			
Winter	(22)	(20)	(22)
Shoulder	0	0	0
Summer	(1)	(1)	(1)

Thermal & Other Benefits	Gross	Net	Lifetime Net
Annualized Water Savings (ccf)	**82**	**74**	**735**
Annualized fuel savings (increase) MMBtu Total	**22,982**	**21,284**	**474,184**
LP	5,666	5,222	122,578
NG	0	0	0
Oil/Kerosene	14,486	13,398	286,822
Wood	2,830	2,664	64,784
Solar	0	0	0
Other	0	0	0
Annualized savings (increase) in O&M($)	**($8,958)**	**($7,265)**	**($145,685)**

Net Societal Benefits	**$3,616,061**

8. Special Reports

8.1 Incentive, Non-Incentive, and Administrative Cost Summary – Electric & TEPF

8.2 Incentive, Non-Incentive, and Administrative Cost Summary – Electric

8.3 Incentive, Non-Incentive, and Administrative Cost Summary – TEPF

8.4 Flexible Load Management Summary

8.5 Act No. 151 Programs Summary

8.6 Act No. 151 Transportation – Program Metrics

8.7 Act No. 151 Transportation – Market Metrics

8.8 Forward Capacity Market Current Claims and Forecasts

8.9 Forward Capacity Market Commitments and Revenue Forecasts

8.1 Incentive, Non-Incentive, and Administrative Cost Summary - Electric & TEPF

2021 Electric and TEPF Costs	Business Energy Services		Residential Energy Services			Development & Support Services	Total	Row
	Business New Construction	Business Existing Facilities	Residential New Construction	Efficient Products	Existing Homes			
Program Costs								
Incentive and Technical Assistance Costs								
Incentive Costs								
Incentives to Participants (RA)	$708,288	$9,270,379	$1,346,882	$7,208,358	$4,898,122	$0	**$23,432,027**	1
Incentives to Trade Allies (RA)	$0	$120,329	$0	$69,605	$207,750	$0	**$397,684**	2
Sub-Total Incentive Costs	**$708,288**	**$9,210,277**	**$1,346,882**	**$7,277,962**	**$5,105,872**	**$0**	**$23,829,711**	3
Technical Assistance Costs								
Services to Participants (RA)	$619,035	$3,550,481	$764,956	$333,802	$540,751	N/A	**$5,809,026**	4
Services to Trade Allies (RA)	$92,138	$628,915	$41,498	$157,554	$154,263	N/A	**$1,074,368**	5
Energy Code and Standards Support (DSS)	N/A	N/A	N/A	N/A	N/A	$27,183	**$27,183**	6
Building Energy Labeling and Benchmarking (DSS)	N/A	N/A	N/A	N/A	N/A	$17,757	**$17,757**	7
Better Buildings by Design (DSS)	N/A	N/A	N/A	N/A	N/A	$45,498	**$45,498**	8
Sub-Total Technical Assistance Costs	**$711,173**	**$4,179,396**	**$806,455**	**$491,357**	**$695,014**	**$90,439**	**$6,973,833**	9
Sub-Total Incentive & Technical Assistance Costs	**$1,419,460**	**$13,389,672**	**$2,153,336**	**$7,769,319**	**$5,800,885**	**$90,439**	**$30,803,544**	10
Non-Incentive Program Costs								
Programs and Implementation (RA)	$166,200	$1,221,697	$119,408	$769,731	$1,881,042	N/A	**$4,158,077**	11
Strategy and Planning (RA)	$33,257	$199,960	$25,485	$75,133	$57,669	N/A	**$391,503**	12
Marketing Program (RA)	$165,457	$984,843	$149,278	$1,532,720	$661,154	N/A	**$3,493,451**	13
Customer Support (DSS)	N/A	N/A	N/A	N/A	N/A	$168,585	**$168,585**	14
General Public Education (DSS)	N/A	N/A	N/A	N/A	N/A	$60,260	**$60,260**	15
Energy Literacy (DSS)	N/A	N/A	N/A	N/A	N/A	$104,035	**$104,035**	16
Applied R&D (DSS)	N/A	N/A	N/A	N/A	N/A	$155,285	**$155,285**	17
Support Services (RA)	$81,664	$615,319	$57,291	$138,025	$138,024	N/A	**$1,030,324**	18
Quality Assurance	N/A	N/A	N/A	N/A	N/A	N/A	**$0**	19
Sub-Total Non-Incentive Program Costs	**$446,577**	**$3,021,819**	**$351,462**	**$2,515,609**	**$2,737,889**	**$488,165**	**$9,561,521**	20
Total Program Costs	**$1,866,038**	**$16,411,491**	**$2,504,798**	**$10,284,928**	**$8,538,774**	**$578,604**	**$40,365,064**	21
Administrative Costs								
Sr. Management, Budget, Financial Oversight (RA)	$31,542	$181,602	$35,822	$89,899	$53,155	N/A	**$392,021**	22
Planning & Reporting (DSS)	N/A	N/A	N/A	N/A	N/A	$305,462	**$305,462**	23
Administration & Regulatory (DSS)	N/A	N/A	N/A	N/A	N/A	$500,598	**$500,598**	24
Public Affairs (DSS)	N/A	N/A	N/A	N/A	N/A	$92,370	**$92,370**	25
Information Systems (DSS)	N/A	N/A	N/A	N/A	N/A	$1,073,257	**$1,073,257**	26
Evaluation (DSS)	N/A	N/A	N/A	N/A	N/A	$366,298	**$366,298**	27
Direct and Indirect Overhead	$211,448	$1,726,437	$289,024	$1,071,628	$852,329	$283,167	**$4,434,034**	28
Total Administrative Costs	**$242,991**	**$1,908,039**	**$324,846**	**$1,161,527**	**$905,485**	**$2,621,153**	**$7,164,041**	29
Total Program and Administrative Costs	**$2,109,028**	**$18,319,530**	**$2,829,644**	**$11,446,456**	**$9,444,259**	**$3,199,757**	**$47,529,105**	30
Earned Compensation								
Base Compensation	N/A	N/A	N/A	N/A	N/A	N/A	**$636,606**	31
Performance Compensation	N/A	N/A	N/A	N/A	N/A	N/A	**$1,790,246**	32
Total Earned Compensation							**$2,426,852**	33
						Overall Total Costs	**$49,955,958**	34

Summary Metrics			
Incentive	**Costs**	**% of Total**	**Row Sources**
Incentive	$23,829,711		3
Technical Assistance	$6,973,833		9
Total Incentive & Technical Assistance	**$30,803,544**	62%	10
Non-Incentive			
Non-Incentive Program Costs	$9,561,521		20
Administrative Costs	$7,164,041		29
Earned Compensation	$2,426,852		33
Total Non-Incentive	**$19,152,414**	38%	20, 29, 33
Overall Total	**$49,955,958**	**100%**	34
Incentive-to-Non-Incentive Cost Ratio		**1.6 to 1.0**	**10 / (20,29,33)**
	Costs	**% of Total**	
Program	$40,365,064	81%	21
Administrative	$7,164,041	14%	29
Earned Compensation	$2,426,852	5%	33
Overall Total	**$49,955,958**	**100%**	34

8.2 Incentive, Non-Incentive, and Administrative Cost Summary - Electric

2021 Electric Costs	Business Energy Services: Business New Construction	Business Energy Services: Business Existing Facilities	Residential Energy Services: Residential New Construction	Residential Energy Services: Efficient Products	Residential Energy Services: Existing Homes	Development & Support Services	Total	Row
Program Costs								
Incentive and Technical Assistance Costs								
Incentive Costs								
Incentives to Participants (RA)	$708,288	$8,531,377	$1,346,882	$5,991,371	$2,080,472	$0	**$18,658,389**	1
Incentives to Trade Allies (RA)	$0	$116,529	$0	$69,605	$9,800	$0	**$195,934**	2
Sub-Total Incentive Costs	**$708,288**	**$8,467,475**	**$1,346,882**	**$6,060,976**	**$2,090,272**	**$0**	**$18,854,323**	3
Technical Assistance Costs								
Services to Participants (RA)	$619,035	$3,452,521	$764,944	$333,731	$375,987	N/A	**$5,546,218**	4
Services to Trade Allies (RA)	$92,138	$628,854	$41,498	$157,554	$141,126	N/A	**$1,061,171**	5
Energy Code and Standards Support (DSS)	N/A	N/A	N/A	N/A	N/A	$24,184	**$24,184**	6
Building Energy Labeling and Benchmarking (DSS)	N/A	N/A	N/A	N/A	N/A	$15,665	**$15,665**	7
Better Buildings by Design (DSS)	N/A	N/A	N/A	N/A	N/A	$38,756	**$38,756**	8
Sub-Total Technical Assistance Costs	**$711,173**	**$4,081,375**	**$806,442**	**$491,286**	**$517,113**	**$78,605**	**$6,685,994**	9
Sub-Total Incentive & Technical Assistance Costs	**$1,419,460**	**$12,548,850**	**$2,153,324**	**$6,552,261**	**$2,607,385**	**$78,605**	**$25,540,317**	10
Non-Incentive Program Costs								
Programs and Implementation (RA)	$166,200	$1,213,554	$119,408	$749,193	$1,078,690	N/A	**$3,327,045**	11
Strategy and Planning (RA)	$33,257	$199,960	$25,485	$75,133	$52,003	N/A	**$385,837**	12
Marketing Program (RA)	$165,457	$984,823	$149,278	$1,532,606	$434,876	N/A	**$3,267,040**	13
Customer Support (DSS)	N/A	N/A	N/A	N/A	N/A	$146,163	**$146,163**	14
General Public Education (DSS)	N/A	N/A	N/A	N/A	N/A	$52,100	**$52,100**	15
Energy Literacy (DSS)	N/A	N/A	N/A	N/A	N/A	$88,629	**$88,629**	16
Applied R&D (DSS)	N/A	N/A	N/A	N/A	N/A	$134,287	**$134,287**	17
Support Services (RA)	$81,664	$583,892	$57,286	$134,214	$81,148	N/A	**$938,203**	18
Quality Assurance	N/A	N/A	N/A	N/A	N/A	N/A	**$0**	19
Sub-Total Non-Incentive Program Costs	**$446,577**	**$2,982,229**	**$351,457**	**$2,491,146**	**$1,646,717**	**$421,179**	**$8,339,305**	20
Total Program Costs	**$1,866,038**	**$15,531,078**	**$2,504,781**	**$9,043,407**	**$4,254,102**	**$499,784**	**$33,879,622**	21
Administrative Costs								
Sr. Management, Budget, Financial Oversight (RA)	$31,542	$180,304	$35,822	$89,472	$45,744	N/A	**$382,884**	22
Planning & Reporting (DSS)	N/A	N/A	N/A	N/A	N/A	$259,643	**$259,643**	23
Administration & Regulatory (DSS)	N/A	N/A	N/A	N/A	N/A	$425,506	**$425,506**	24
Public Affairs (DSS)	N/A	N/A	N/A	N/A	N/A	$78,515	**$78,515**	25
Information Systems (DSS)	N/A	N/A	N/A	N/A	N/A	$912,244	**$912,244**	26
Evaluation (DSS)	N/A	N/A	N/A	N/A	N/A	$315,327	**$315,327**	27
Direct and Indirect Overhead	$211,448	$1,645,965	$289,023	$958,266	$459,510	$240,692	**$3,804,904**	28
Total Administrative Costs	**$242,991**	**$1,826,270**	**$324,845**	**$1,047,737**	**$505,253**	**$2,231,927**	**$6,179,023**	29
Total Program and Administrative Costs	**$2,109,028**	**$17,357,348**	**$2,829,626**	**$10,091,145**	**$4,759,355**	**$2,731,712**	**$40,058,645**	30
Earned Compensation								
Base Compensation	N/A	N/A	N/A	N/A	N/A	N/A	**$535,755**	31
Performance Compensation	N/A	N/A	N/A	N/A	N/A	N/A	**$1,515,042**	32
Total Earned Compensation							**$2,050,797**	33
						Overall Total Costs	**$42,109,442**	34

Summary Metrics			
Incentive	**Costs**	**% of Total**	**Source of Rows**
Incentive	$18,854,323		3
Technical Assistance	$6,685,994		9
Total Incentive & Technical Assistance	**$25,540,317**	61%	10
Non-Incentive			
Non-Incentive Program Costs	$8,339,305		20
Administrative Costs	$6,179,023		29
Earned Compensation	$2,050,797		33
Total Non-Incentive	**$16,569,125**	39%	20, 29, 33
Overall Total	**$42,109,442**	**100%**	34
Incentive-to-Non-Incentive Cost Ratio		**1.5 to 1.0**	**10 / (20,29,33)**
	Costs	**% of Total**	
Program	$33,879,622	80%	21
Administrative	$6,179,023	15%	29
Earned Compensation	$2,050,797	5%	33
Overall Total	**$42,109,442**	**100%**	34

8.3 Incentive, Non-Incentive, and Administrative Cost Summary - TEPF

2021 TEPF Costs	Business Energy Services: Business New Construction	Business Energy Services: Business Existing Facilities	Residential Energy Services: Residential New Construction	Residential Energy Services: Efficient Products	Residential Energy Services: Existing Homes	Development & Support Services	Total	Row
Program Costs								
Incentive and Technical Assistance Costs								
Incentive Costs								
Incentives to Participants (RA)	$0	$739,002	$0	$1,216,987	$2,817,650	$0	**$4,773,638**	1
Incentives to Trade Allies (RA)	$0	$3,800	$0	$0	$197,950	$0	**$201,750**	2
Sub-Total Incentive Costs	**$0**	**$742,802**	**$0**	**$1,216,987**	**$3,015,600**	**$0**	**$4,975,388**	3
Technical Assistance Costs								
Services to Participants (RA)	N/A	$97,960	$12	$71	$164,765	N/A	**$262,808**	4
Services to Trade Allies (RA)	N/A	$60	N/A	N/A	$13,136	N/A	**$13,197**	5
Energy Code and Standards Support (DSS)	N/A	N/A	N/A	N/A	N/A	$2,999	**$2,999**	6
Building Energy Labeling and Benchmarking (DSS)	N/A	N/A	N/A	N/A	N/A	$2,092	**$2,092**	7
Better Buildings by Design (DSS)	N/A	N/A	N/A	N/A	N/A	$6,743	**$6,743**	8
Sub-Total Technical Assistance Costs	**$0**	**$98,020**	**$12**	**$71**	**$177,901**	**$11,834**	**$287,839**	9
Sub-Total Incentive & Technical Assistance Costs	**$0**	**$840,822**	**$12**	**$1,217,058**	**$3,193,500**	**$11,834**	**$5,263,227**	10
Non-Incentive Program Costs								
Programs and Implementation (RA)	N/A	$8,143	N/A	$20,538	$802,352	N/A	**$831,033**	11
Strategy and Planning (RA)	N/A	N/A	N/A	N/A	$5,666	N/A	**$5,666**	12
Marketing Program (RA)	N/A	$19	N/A	$114	$226,278	N/A	**$226,411**	13
Customer Support (DSS)	N/A	N/A	N/A	N/A	N/A	$22,422	**$22,422**	14
General Public Education (DSS)	N/A	N/A	N/A	N/A	N/A	$8,161	**$8,161**	15
Energy Literacy (DSS)	N/A	N/A	N/A	N/A	N/A	$15,405	**$15,405**	16
Applied R&D (DSS)	N/A	N/A	N/A	N/A	N/A	$20,998	**$20,998**	17
Support Services (RA)	N/A	$31,428	$5	$3,811	$56,877	N/A	**$92,121**	18
Quality Assurance	N/A	N/A	N/A	N/A	N/A	N/A	**$0**	19
Sub-Total Non-Incentive Program Costs	**$0**	**$39,590**	**$5**	**$24,463**	**$1,091,172**	**$66,985**	**$1,222,216**	20
Total Program Costs	**$0**	**$880,413**	**$17**	**$1,241,521**	**$4,284,672**	**$78,819**	**$6,485,442**	21
Administrative Costs								
Sr. Management, Budget, Financial Oversight (RA)	N/A	$1,298	N/A	$428	$7,412	N/A	**$9,137**	22
Planning & Reporting (DSS)	N/A	N/A	N/A	N/A	N/A	$45,819	**$45,819**	23
Administration & Regulatory (DSS)	N/A	N/A	N/A	N/A	N/A	$75,092	**$75,092**	24
Public Affairs (DSS)	N/A	N/A	N/A	N/A	N/A	$13,856	**$13,856**	25
Information Systems (DSS)	N/A	N/A	N/A	N/A	N/A	$161,013	**$161,013**	26
Evaluation (DSS)	N/A	N/A	N/A	N/A	N/A	$50,971	**$50,971**	27
Direct and Indirect Overhead	$0	$80,471	$2	$113,362	$392,820	$42,475	**$629,130**	28
Total Administrative Costs	**$0**	**$81,770**	**$2**	**$113,790**	**$400,231**	**$389,226**	**$985,018**	29
Total Program and Administrative Costs	**$0**	**$962,182**	**$19**	**$1,355,311**	**$4,684,903**	**$468,045**	**$7,470,460**	30
Earned Compensation								
Base Compensation	N/A	N/A	N/A	N/A	N/A	N/A	**$100,851**	31
Performance Compensation	N/A	N/A	N/A	N/A	N/A	N/A	**$275,204**	32
Total Earned Compensation							**$376,055**	33
						Overall Total Costs	**$7,846,515**	34

Summary Metrics			
Incentive	**Costs**	**% of Total**	**Row Sources**
Incentive	$4,975,388		3
Technical Assistance	$287,839		9
Total Incentive & Technical Assistance	**$5,263,227**	67%	10
Non-Incentive			
Non-Incentive Program Costs	$1,222,216		20
Administrative Costs	$985,018		29
Earned Compensation	$376,055		33
Total Non-Incentive	**$2,583,289**	33%	20, 29, 33
Overall Total	**$7,846,515**	**100%**	34
Incentive-to-Non-Incentive Cost Ratio		**2.0 to 1.0**	**10 / (20,29,33)**

	Costs	**% of Total**	
Program	$6,485,442	83%	21
Administrative	$985,018	13%	29
Earned Compensation	$376,055	5%	33
Overall Total	**$7,846,515**	**100%**	34

8.4 Flexible Load Management Summary

	% of Year Expired	*100%*		*% of Period Expired*	*33%*	
FLM Major Market Spending	**Budget 2021**	**Actual 2021**	**%**	**Budget 2021-2023**	**Actual 2021-2023**	**%**
Business Sector						
Existing Facilities	$877,399	$464,008	53%	$2,632,196	$464,008	18%
New Construction	$0	$34,939	N/A	$0	$34,939	N/A
Total Business Sector	**$877,399**	**$498,947**	**57%**	**$2,632,196**	**$498,947**	**19%**
Residential Sector						
New Construction	$0	$0	N/A	$0	$0	N/A
Efficient Products	$0	$58,547	N/A	$0	$58,547	N/A
Existing Homes	$269,541	$16,634	6%	$808,624	$16,634	2%
Total Residential Sector	**$269,541**	**$75,181**	**28%**	**$808,624**	**$75,181**	**9%**
Total FLM Spending	**$1,146,940**	**$574,128**	**50%**	**$3,440,820**	**$574,128**	**17%**

Annual kW of Flexible Load (controllable load) Installed	**Target 2021**	**Actual 2021**	**%**	**Target 2021-2023**	**Actual 2021-2023**	**%**
Business Sector						
Existing Facilities	600	1,163	194%	1,800	1,163	65%
New Construction	-	25	N/A	-	25	N/A
Total Business Sector	**600**	**1,188**	**198%**	**1,800**	**1,188**	**66%**
Residential Sector						
New Construction	-	-	N/A	-	-	N/A
Efficient Products	-	-	N/A	-	-	N/A
Existing Homes	300	9	3%	900	9	1%
Total Residential Sector	**300**	**9**	**3%**	**900**	**9**	**1%**
Total kW Flexible Load Installed	**900**	**1,197**	**133%**	**2,700**	**1,197**	**44%**

FLM Incentive & Non-Incentive Spending	**Budget 2021**	**Actual 2021**	**%**	**Budget 2021-2023**	**Actual 2021-2023**	**%**
Incentives	$734,440	$225,205	31%	$1,237,500	$225,205	18%
Non-Incentives	$412,500	$348,923	85%	$2,203,320	$348,923	16%
Total FLM Spending	**$1,146,940**	**$574,128**	**50%**	**$3,440,820**	**$574,128**	**17%**

8.5 Act No. 151 Programs Summary

	% of Year Expired	*100%*		*% of Period Expired*	*33%*	
Act No. 151 Major Market Spending	**Budget 2021**	**Actual 2021**	**%**	**Budget 2021-2023**	**Actual 2021-2023**	**%**
Business Sector						
Existing Facilities	$0	$0	N/A	$0	$0	N/A
New Construction	$0	$0	N/A	$0	$0	N/A
Total Business Sector	**$0**	**$0**	N/A	**$0**	**$0**	N/A
Residential Sector						
New Construction	$0	$0	N/A	$0	$0	N/A
Efficient Products	$1,535,000	$1,400,506	91%	$5,417,000	$1,400,506	26%
Existing Homes	$0	$4,660	N/A	$0	$4,660	N/A
Total Residential Sector	**$1,535,000**	**$1,405,166**	**92%**	**$5,417,000**	**$1,405,166**	**26%**
Total Act No. 151 Spending	**$1,535,000**	**$1,405,166**	**92%**	**$5,417,000**	**$1,405,166**	**26%**

Act No. 151 Incentive & Non-Incentive Spending	**Budget 2021**	**Actual 2021**	**%**	**Budget 2021-2023**	**Actual 2021-2023**	**%**
Incentives	$460,000	$287,261	62%	$2,550,000	$287,261	11%
Non-Incentives **Total**	$1,075,000	$1,117,905	104%	$2,867,000	$1,117,905	39%
Act No. 151 Spending	**$1,535,000**	**$1,405,166**	**92%**	**$5,417,000**	**$1,405,166**	**26%**

Business Existing Facilities Lighting & Custom Project Variance[1]	**DRP Model 2021**	**Actual 2021**	**%**	**DRP Model 2021-2023**	**Actual 2021-2023**	**%**
Incentives						
Lighting	$4,306,230	$2,340,569	54%	$11,804,118	$2,340,569	20%
Custom C&I[2]	$4,791,618	$4,697,951	98%	$14,266,014	$4,697,951	33%
Annual Net MWh Savings						
Lighting	29,888	20,755	69%	80,639	20,755	26%
Custom C&I	23,896	14,229	60%	70,193	14,229	20%

[1] *Business Existing Facilities Lighting & Custom Project Variance reporting is being provided for the duration of the 2021-2023 performance period to identify activities for a subset of major markets targeted for modification by Efficiency Vermont in its February 17, 2021 Motion to Amend, filed in Case No. 19-3272-PET.*

[2] *All lighting, flexible load management, refrigerant management, and single head/multi-head cold climate heat pump measures are excluded*

8.6 Act No. 151 Transportation - Program Metrics

Efficiency Vermont launched an EV marketing and dealership program in the second half of 2021. Metrics being reported on 8.4.3 and 8.4.4 are intended to reflect the impacts of the program directly, and market trends more generally. Key metrics being tracked may change, or be altered or removed over time, as more experience in this market develops.

Program Metrics								
#	Metric Description	Measured By	Target Description	Reporting Frequency	Baseline	3-Yr Target	Cumulative Status	%
EV Dealer Program Metrics								
P1	Number of dealerships enrolled in the EEN EV Dealer network	Number of signed participation agreements	40-60 dealerships enrolled in EEN EV Dealer network by the end of 2023.	quarterly	0	60	24	40%
		% of enrolled dealerships are used car dealerships	At least 20% are used car dealerships	quarterly	0	12	0	0%
P2	Number of EEN EV Dealers that complete at least one EV investment at their facility	Number of dealers associated with at least one EV Readiness project	100% of participating dealers complete at least one EV Readiness project at their facility by the end of 2023	quarterly	0	60	12	20%
P3	Number of EVs associated with the Dealership/Salesperson EV Sales Incentive	Number of EV Sales Incentives reported	2,000 EVs associated with Dealership/Salesperson EV Sales Incentive by the end of 2023	quarterly	0	2,000	1	0%
P4	Number of EEN EV Dealer staff that attend EV Sales Training	Number of training attendees	80-120 salespeople attend trainings 2021-2023	quarterly	0	120	3	3%
P5	Percent of EV Sales Training participants that pass the post-session quiz	Post-training evaluation	90% of attendees pass the posttraining evaluation (first attempt)	quarterly	0	90%	33%	37%
P6	Percent of attendees that report satisfaction with any training	Post-training evaluation		quarterly	0	90%	100%	111%
P7	Percent of EEN EV Dealers that report being motivated and supported by the program to increase the number of EVs they stock and sell	Dealer survey (to be developed)	At least 50% of participating dealers report that the program had an impact on the number of EVs they stock and sell	performance period	0	50%	N/A	NA
EV Campaign Metrics								
P8	Customer engagement with the EV campaign digital platform	Number of sessions (DriveElectricVermont.com)	20% increase in digital engagement	quarterly	118,580	142,296	50,796	36%
P9	Number of EV-related contacts	Number of incoming calls to Go Vermont/Drive Electric Vermont, and transportation calls to Efficiency Vermont	20% increase in EV-related contacts	quarterly	600	720	208	29%
P10	Average likelihood of Vermonters to purchase an EV, as measured on scale of 1 (not likely) to 5 (very likely)	Consumer research (EVT brand awareness survey)	Vermonters report 20% more likelihood in purchasing an EV	performance period	2.5	3.0	N/A	NA

Notes

The Program Metrics are tied to specific to program activities and can be measured with Efficiency Vermont program data. Developed to support and be in alignment with the Market Metrics and goals presented in the Act 151 workpaper, the Program Metrics in many cases represent “leading indicators” for desired long-term market results focused on two key areas of program activity: dealership engagement and consumer education. These metrics are meant to inform progress toward program objectives and evaluate program impact and success (this is the main distinction from the Market Metrics).

"EEN" refers to the Efficiency Vermont Efficiency Excellence Network
All metrics: "EV" refers to a plug-in electric vehicle (all-electric or plug-in hybrid)
All metrics: "dealership" refers to a new or used car dealership with a physical location in the state of Vermont
P1-P10: The "%" column represents progress towards the 3-year target.
P5: The post-training quiz includes six required questions that test participants' knowledge of concepts and information presented during the training. Participants must get at least 5 out of 6 questions correct to pass.
P8 & P9: Baseline is 2-year period between 9/1/2019 - 8/31/2021
P10: Likelihood to purchase is measured on a scale from 1 (Not at all likely) to 5 (Very likely)

N/A means data is not available at this time.

8.7 Act No.151 Transportation - Market Metrics

	M1: Annual number of Vermont dealerships selling at least 1 EV		M2: Annual number of EVs sold by all VT dealerships		M3: Annual number of EVs sold by EEN EV Dealers		M4: Cumulative number of EV registrations		M5: % of total Vermont light duty vehicle registrations that are EVs	
County	**2020 (Baseline)**	**2021**	**2020 (Baseline)**	**2021**	**2020 (Baseline)**	**2021**	**2020 (Baseline)**	**2021**	**2020 (Baseline)**	**2021**
Addison	2	N/A	9	N/A	0	0	283	436	Measured on a statewide basis	
Bennington	5	N/A	16	N/A	0	0	189	319		
Caledonia	4	N/A	29	N/A	0	0	134	185		
Chittenden	22	N/A	402	N/A	0	0	1,616	2,404		
Essex	0	N/A	0	N/A	0	0	12	13		
Franklin	5	N/A	43	N/A	0	0	117	191		
Grand Isle	0	N/A	0	N/A	0	0	61	76		
Lamoille	1	N/A	22	N/A	0	0	131	205		
Orange	0	N/A	0	N/A	0	0	149	242		
Orleans	0	N/A	0	N/A	0	0	70	111		
Rutland	7	N/A	111	N/A	0	0	228	381		
Washington	7	N/A	53	N/A	0	0	573	802		
Windham	3	N/A	31	N/A	0	0	355	492		
Windsor	7	N/A	39	N/A	0	0	421	632		
Unknown	0	N/A	0	N/A	0	0	21	96		
Statewide	**63**	**0**	**755**	**0**	**0**	**0**	**4,360**	**6,585**	**2.8%**	**5.4%**

N/A means data is not available at this time.

M1: Number of VT dealerships selling at least 1 EV registered in VT. Excludes direct-to-consumer sellers and sellers of electric motorcycles/mopeds. Data source: Vermont Dept of Motor Vehicles vehicle registration database as of 1/5/2022. Data processed by Vermont Agency of Natural Resources Dept of Environmental Conservation.

M2: Number of EVs sold by a VT dealership and registered in VT. Excludes direct-to-consumer sellers; excludes electric Motorcycles/Mopeds and Neighborhood EVs; excludes EVs sold by a dealership outside of Vermont. Data source: Vermont Dept of Motor Vehicles vehicle registration database as of 1/5/2022. Data processed by Vermont Agency of Natural Resources Dept of Environmental Conservation.

M3: Dealer must be enrolled in program for at least 6 months out of the year for sales to count toward this metric. Data source: Efficiency Vermont.

M4: Data source: Vermont Dept of Motor Vehicles vehicle registration database as of 1/5/2022. Data processed by Vermont Agency of Natural Resources Dept of Environmental Conservation.

M5: Data source: Vermont Vehicle and Automotive Distributors Association. County data not available.

The Market Metrics were presented in the Act 151 workpaper. The purpose of these metrics is to track general market trends that will inform Efficiency Vermont program decisions and direction. These metrics will be tracked using data largely from outside Efficiency Vermont, and will help us understand how the market is transforming and assess whether our market interventions are appropriate based on market adoption trends.

8.8 Forward Capacity Market Current Claims and Forecasts

	Total Portfolio of FCM Participation	Efficiency Vermont Portion of FCM Participation[1]	GMP EEF Portion of FCM Participation[1]	GMP CEED Portion of FCM Participation[1]
Revenue Received				
Revenue Received for Quarter	$1,558,152	$1,529,327	$13,777	$15,048
Revenue Received Year to Date	$6,093,249	$5,971,236	$65,319	$56,693
* Annual Revenue Estimate	$6,092,700	$5,970,700	$65,300	$56,700
% Annual Revenue Estimate Received	100.0%	100.0%	100.0%	100.0%
Revenue Received during 3-Year Period (2021-2023)	$6,093,249	$5,971,236	$65,319	$56,693
Revenue Estimate for 3-Year Period (2021-2023)	$16,106,600	$15,805,200	$157,600	$143,800
% 3-Year Period Revenue Estimate Received	37.8%	37.8%	41.4%	39.4%
VEIC Costs				
Costs for Quarter	$62,644	N/A		
Year to Date Costs	$191,432			
* Annual Budget Estimate	$259,200			
Unspent Annual Budget Estimate	$67,768			
% Annual Budget Estimate Unspent	26.1%			
FCM Peak Capacity Results[2]				
FCM Summer Peak MW Performance at end of Quarter[3]	113.800	111.381	1.153	1.266
Annual Summer FCM Peak MW Forecast (FCM Obligation)	108.201	105.782	1.153	1.266
% Annual Summer FCM Peak MW Commitment Achieved	105.2%	105.3%	100.0%	100.0%
3-Year Summer FCM Peak MW Forecast (FCM Obligation)	106.208	104.031	1.038	1.139
% 3-Year Summer FCM Peak MW Commitment Achieved	107.1%	107.1%	111.1%	111.1%

[1]The GMP EEF and CEED portions of FCM revenue shown here are net of allocated cost of participation - as such, costs are not broken out separately below.

[2]Reflects cumulative peak MW savings from measures installed since 6/16/2006. Full details on the ISO-NE Forward Capacity Market and requirements for participation, including calculation of capacity obligations, can be found in: "Playing with the Big Boys: Energy Efficiency as a Resource in the ISO-NE Forward Capacity Market", www.veic.org/ResourceLibrary

[3] Actual claims filed with ISO-NE are for Summer Peak Capacity (MW) for April through November, and for Winter Peak Capacity (MW) for December through March.

* Annual projections are estimates only and provided for informational purposes.

8.9 Forward Capacity Market Future Commitments and Revenue Forecast [1,2]

FCM Period	Delivery Dates	Summer Peak Capacity (MW)				ISO FCM Revenue		
		Existing Peak MW Portfolio	Portfolio Peak MW Expansions	Total Peak MW Commitment	Actual Peak MW to Date	Forecasted Revenue	Actual Revenue	Actual Over/(Under) Forecast
1	6/1/2010 - 5/31/2011	39.117	-	**39.117**		$2,607,552	$2,891,075	$283,523
2	6/1/2011 - 5/31/2012	41.377	7.037	**48.414**		$3,222,168	$3,415,893	$193,725
3	6/1/2012 - 5/31/2013	46.040	9.224	**55.264**		$3,498,804	$3,621,871	$123,067
4	6/1/2013 - 5/31/2014	54.103	17.990	**72.093**		$4,450,980	$4,465,395	$14,415
5	6/1/2014 - 5/31/2015	71.313	12.456	**83.769**		$5,107,413	$5,029,523	($77,890)
6	6/1/2015 - 5/31/2016	84.326	14.806	**99.132**		$4,542,300	$3,390,207	($1,152,093)
7	6/1/2016 - 5/31/2017	94.062	15.500	**109.562**		$4,512,993	$3,647,552	($865,440)
8	6/1/2017 - 5/31/2018	108.990	-	**108.990**		$8,389,492	$8,266,060	($123,432)
9	6/1/2018 - 5/31/2019	104.367	-	**104.367**		$12,918,648	$12,996,875	$78,227
10	6/1/2019 - 5/31/2020	99.603	-	**99.603**		$9,074,690	$9,346,421	$271,731
11	6/1/2020 - 5/31/2021	69.642	15.474	**85.116**		$5,843,057	$5,905,124	$62,067
12	6/1/2021 - 5/31/2022	77.669	25.969	**103.638**	113.800	$6,220,063	$3,703,602	
13	6/1/2022 - 5/31/2023	95.701	12.500	**108.201**		$5,328,679		
14	6/1/2023 - 5/31/2024	97.708	8.500	**106.208**		$2,754,272		
15	6/1/2024 - 5/31/2025	92.556	9.800	**102.356**		$3,285,810		
16	6/1/2025 - 5/31/2026	99.258	6.200	**105.458**				
					Total:	**$81,756,921**	**$66,679,599**	**($1,192,100)**

YTDrent Financial Assurance (FA) Obligations Related to FCM Capacity Above3									
	Financial Assurance Obligations for Non-Commercial Capacity								Total Financial Assurance Obligation[4]
	FCM#1-12	FCM#13	FCM#14	FCM#15	FCM#16	Non-Hourly Requirements	Subtotals	Credit Test Factor	
Financial Assurance Obligation at End of This Quarter	Fully Commercial	$21,489	$150,313	$92,155	$0	$779	$264,737	80%	**$330,921**
Expected Upcoming Transactions:									
Additional FA on New Obligations		$0	$0	$0	$36,614		$36,614		
FA Obligation Released (Est)		$0	$0	$0	$0		$0		
Financial Assurance Obligation at End of Next Quarter (Estimate)		$21,489	$150,313	$92,155	$36,614	$779	$301,350	80%	**$376,688**
Financial Assurance Forfeited[5]	**$211,623**								

Proposed Commitments		New Capacity Proposed (Summer Peak MW) Not Committed or Not Yet Delivered			
	FCM #1-12	FCM#13	FCM#14	FCM#15	FCM#16
Delivery Period begins:	Commitment Delivered	**6/1/22**	**6/1/23**	**6/1/24**	**6/1/25**
Date of Auction		**2/4/19**	**2/3/20**	**2/8/21**	**2/7/22**
Date of Qualification Notification		**9/28/18**	**9/27/19**	**10/2/20**	**10/1/21**
Date of Qualification Submission		**6/21/18**	**6/21/19**	**6/19/20**	**6/18/21**
Date of Show of Interest		**4/27/18**	**4/26/19**	**4/24/20**	**4/23/21**
Additional FCM Peak Capacity Qualified to participate in upcoming auction		Committed	Committed	Committed	**6.200**
Additional FCM Peak Capacity YTDrently under review for Qualification					**Qualified**
Additional FCM Peak Capacity submitted as a Show of Interest for future auction					**Submitted**

1As of this date, we have commitments and committed pricing through FCM Auction #15. The information in this section reflects only ACTUAL committed capacity and YTDrently committed prices for that capacity.

[2]Commitments include capacity from GMP EEF and CEED projects.

[3]Our Financial Assurance obligations are covered through cash on deposit with BlackRock.

[4]Includes mark-up to cover 80% credit test.

[5] Financial Assurance forfeited upon termination of 11.385 MW of FCM#6 obligation in Oct. 2016.

9. PROGRAM IMPLEMENTATION PLANS

SUBMITTED IN 2021

9.1 PROGRAM IMPLEMENTATION PLANS SUBMITTED IN 2021, AND 2021 STATUS

#	Document Name / Title	Major Market	Status	Date
124	Refrigeration Management	RES, C&I	Active	4/14/2021
125	Flexible Load Management	RES, C&I	Active	5/26/2021
126	Retail Lighting	RES	Active	12/8/2021

Key:

RES	Residential
LI	Low Income
LIMF	Low Income Multi‐Family
BES	Business Energy Services
MF	Multi-Family
C&I	Commercial & Industrial

10. DEFINITIONS AND END NOTES

10.1 DATA TABLES OVERVIEW

1 – Section **10.2** includes a list of definitions for items in the data tables.

2 – Data items for which data are not available are labeled "nav". Data items for which data are not applicable are labeled "nap" or "NA".

3 – Except where noted, Efficiency Vermont expenditures data in this report were incurred during the specified reporting periods. All costs are in nominal dollars.

4 - Except where noted, savings data are from measures reported during the specified reporting periods. Electric savings are reported at generation and all savings are net of all approved adjustment factors.

5 – Efficiency Vermont Resource Acquisition and Development and Support Services costs include an operations fee of 1.35% and are reported in all applicable cost categories. The indirect charges and operations fees for "Incentives to Participants" and "Incentives to Trade Allies" are reported with the "Administration" costs.

6 – Data for "Incentives to Participants" in Tables **6.9, 6.14, 6.16, 6.19, 6.22, 6.24, 7.1, 7.4, 7.7, 7.10, 7.13, 7.16, 7.19, 7.22, 7.25, 7.28, 8.3.1, 8.3.2, and 8.3.3** are from Efficiency Vermont's accounting system. "Participant Incentives Paid" on all other tables are from Efficiency Vermont's project tracking and reporting system. Data for "Incentives to Participants" in Tables **6.10, 6.11, 6.12, 6.15, and 7.5** exclude incentives paid to Energy Savings Account Pilot participants.

7 – "Annualized MWh Savings (adjusted for measure life)," "Winter Coincident Peak kW Savings (adjusted for measure life)" and "Summer Coincident Peak kW Savings (adjusted for measure life)" on Tables **6.9** are provided for reference only. These data exclude savings for measures that have reached the end of their specified lifetime.

8 - Whenever Efficiency Vermont works in collaboration with other providers of efficiency services, savings and participation may be reported by more than one organization. As a result, actual savings and participation might be less than the sum of all the organizations' reported savings. Any data that overlaps or includes data from other services provided by Efficiency Vermont that are external to the Order of Appointment is footnoted in the document.

10.2 DEFINITIONS AND REPORT TEMPLATE

The table templates that appear in the Efficiency Vermont Savings Claim Summary report and Annual Report were developed as a collaborative effort between Efficiency Vermont and the Vermont Public Service Department. Note that there are two major table formats, one for the markets and services summary and the other for breakdowns by end use, utility and county

savings. The definitions of the data reported in these tables follow. The numbers in parentheses on the template refer to the footnoted definitions that immediately follow.

	Prior Year 2020	Current Year 2021	Cumulative starting 1/1/21	Cumulative starting 1/1/12
	(1)	(2)	(3)	(4)
# participants with installations	(5)			
Operating Costs				
Administration	(6)			
Programs and Implementation	(7)			
Strategy and Planning	(8)			
Subtotal Operating Costs	(9)			
Technical Assistance Costs				
Services to Participants	(10)			
Services to Trade Allies	(11)			
Subtotal Technical Assistance Costs	(12)			
Support Services				
Consulting	(13)			
Customer Support	(14)			
Data and Technical Services	(15)			
Information Technology	(16)			
Marketing	(17)			
Policy & Public Affairs	(18)			
Other	(19)			
Subtotal Support Services Costs	(20)			
Incentive Costs				
Incentives to Participants	(21)			
Incentives to Trade Allies	(22)			
Subtotal Incentive Costs	(23)			
Total Efficiency Vermont Costs	(24)			
Total Participant Costs	(25)			
Total Third-Party Costs	(26)			
Total Resource Acquisition Costs	(27)			
Annualized MWh/MMBtu Savings	(28)			
Lifetime MWh/MMBtu Savings	(29)			
TRB Savings (2021 $)	(30)			
Winter Coincident Peak kW Savings	(31)			
Summer Coincident Peak kW Savings	(32)			
GHG Reductions (metric tons CO_2e)	(33)			
Annualized MWh/MMBtu Savings/Participant	(34)			
Weighted Lifetime	(35)			

Annualized MWh Savings (adjusted for measure life)	(36)
Winter Coincident Peak kW Savings (adjusted for measure life)	(37)
Summer Coincident Peak kW Savings (adjusted for measure life)	(38)

DEFINITIONS FOR THE FIELDS IN THE REPORT TABLE TEMPLATES:

(1) Activity for the prior reporting year.

(2) Activity for the current reporting year.

(3) Data reported for the current performance period (2021-2023) starting January 1, 2021 through December 31, 2023.

(4) Data reported starting January 1, 2012 through December 31, 2021.

(5) Number of customers with installed measures. The "# participants with installations" are counted by summing unique physical locations (sites) where efficiency measures have been installed for the reporting period.

(6) Costs include Efficiency Vermont senior management, budgeting and financial oversight. Administration costs also include the operations fee (margin) and corporate indirect charges that were applied to (21) Incentives to Participants[1] and (22) Incentives to Trade Allies.

(7) Costs directly associated with the programs and implementation of resource acquisition activities.

(8) Costs related to program design, planning, screening, and other similar strategy and planning functions.

(9) Subtotal of all operating costs detailed in the categories above: (6) + (7) + (8).

(10) Costs related to technical assistance, conducting technical analyses, preparing packages of efficiency measures, contract management, and project follow-up provided to customers.

(11) Costs related to technical assistance, educational or other support services provided to entities other than individual participants, such as trade allies, manufacturers, wholesalers, builders, and architects.

[1] All costs for fields 6 through 19 include a 1.35% operations fee (or margin) paid to VEIC as administrator of Efficiency Vermont. Other than the 1.35% mark-up, VEIC is reimbursed at cost for the administration of Efficiency Vermont. The operations fee is not applied to the Energy Savings Account Pilot spending.

(12) Subtotal reflecting total technical assistance costs: (10) + (11).

(13) Costs related to support provided by the VEIC Consulting group.

(14) Costs related to support provided by the VEIC Customer Support division.

(15) Costs related to support provided by the VEIC Data and Technical Support Services division.

(16) Costs related to support provided by the VEIC Information Technology division.

(17) Costs related to support provided by the VEIC Marketing division.

(18) Costs related to support provided by the VEIC Policy & Public Affairs division.

(19) Costs related to support provided by the other VEIC divisions.

(20) Subtotal cost of Support Services.

(21) Direct payments to participants to defray the costs of specific efficiency measures. This value includes payments to Energy Savings Account Participants.

(22) Incentives paid to manufacturers, wholesalers, builders, retailers, or other non-customer stakeholders to encourage their participation. These incentives do not defray the costs of specific efficiency measures.

(23) Subtotal reflecting total incentive costs: (21) + (22).

(24) Total costs incurred by Efficiency Vermont: (9) + (12) + (20) + (23).

(25) Total costs incurred by participants and related to Efficiency Vermont or utility activities. This category includes the participant contribution to the capital costs of installed measures and to specific demand-side-management (DSM)-related services, such as technical assistance or energy ratings. It does not include Efficiency Vermont incentives or services.

(26) Total costs incurred by third parties (i.e., entities other than Efficiency Vermont and participants) and directly related to Efficiency Vermont or utility DSM activities. This category includes contributions by third parties to the capital costs of installed measures and to specific DSM-related services, such as technical assistance or energy ratings.

(27) Total cost of Resource Acquisition: (24) + (25) + (26).

(28) Annual MWh savings at generation or MMBtu savings, net of all approved adjustment factors (e.g., free riders, spillover, line loss) for measures installed during the current reporting period.

(29) Lifetime estimated MWh or MMBtu savings for measures installed during the current reporting year, at generation and net of all approved adjustment factors.

(30) Total Resource Benefits (TRB) savings for measures installed during the current reporting period. TRB includes gross electric benefits, fossil fuel savings, and water savings. TRB is stated in 2021 dollars throughout the report.

(31) Estimated impact of measures during the winter peak period, at generation, net of adjustment factors.

(32) Estimated impact of measures during the summer peak period, at generation, net of adjustment factors.

(33) Annual greenhouse gas carbon reductions (metric tons CO_2e) for measures installed during the current reporting year, at generation and net of all approved adjustment factors. Includes all non- energy, fuel, and electric savings.

(34) Annual MWh savings per participant, net at generation or MMBtu savings per participant: (28) ÷ (5).

(35) Average lifetime, in years, of measures weighted by savings: (29) ÷ (28).

(36) Adjusted annualized MWh savings at generation and net of all approved adjustment factors (e.g., free riders, spillover, line loss) for measures installed during the current reporting period. These data include savings for measures that have not yet expired during the reporting period and exclude savings for measures that have reached the end of their specified lifetime.

(37) Adjusted impact of measures during the winter peak period, at generation, net of adjustment factors. These data include savings for measures that have not yet expired during the reporting period and exclude savings for measures that have reached the end of their specified lifetime.

(38) Adjusted impact of measures during the summer peak period, at generation, net of adjustment factors. These data include savings for measures that have not yet expired during the reporting period and exclude savings for measures that have reached the end of their specified lifetime.

X.X.X. Breakdown Report

End Use or Utility or County	# of Participants	MWh Saved	GHG (metric tons CO_2e Saved)	Lifetime MWh Saved	Winter KW Saved	Summer KW Saved	Fuel MMBtu Saved	TRB Saved	Participant Incentives Paid	Participant Costs
	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)

ITEMS 38-47 REFLECT INSTALLED MEASURES FOR THE CURRENT REPORTING PERIOD.

(38) Number of participants with installed measures for the specified End Use, Utility, or County.

(39) Annualized MWh savings at generation, net of all approved adjustment factors (e.g., free riders, spillover, line loss) for measures installed during the current reporting period. This is the same number as that reported on line (28) for Electric Resource Acquisition programs.

(40) Annual greenhouse gas carbon reductions (metric tons CO_2e) for measures installed during the current reporting period, at generation and net of all approved adjustment factors. This is the same number as that reported on line (33).

(41) Lifetime estimated MWh savings for measures installed during the current reporting period, at generation and net of all approved adjustment factors. This is the same number as that reported on line (29).

(42) Estimated impact of measures during the winter peak period, at generation, net of adjustment factors. This is the same number as that reported on line (31).

(43) Estimated impact of measures during the summer peak period, at generation, net of adjustment factors. This is the same number as that reported on line (32).

(44) MMBtu estimated to be saved (positive) or used (negative) for alternative fuels as a result of measures installed in the end use. This is the same number as that reported on line (28) for Thermal Energy and Process Fuels Resource Acquisition programs.

(45) Total Resource Benefits (TRB) savings for measures installed during the current reporting period. TRB includes gross electric benefits, fossil fuel savings, and water savings. TRB is stated in 2021 dollars throughout the report. This is the same number as that reported on line (30).

(46) Incentives paid by Efficiency Vermont to participants for measures installed during the current reporting period. This value may not be equal to the number that is reported on line (21) due to a limited number of incentive payments to participants for efficiency measures and

services with no savings claims. This value excludes payments to Energy Savings Account Participants.

(47) Costs incurred by participants and related to Efficiency Vermont or utility activities. This is the same number as that reported on line (25).

20 WINOOSKI FALLS WAY, 5TH FLOOR
WINOOSKI, VERMONT 05404
(888) 921-5990

WWW.EFFICIENCYVERMONT.COM