

# Efficiency Vermont

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2020

ANNUAL REPORT

DECEMBER 9, 2021

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Pursuant to the June 23, 2021 *Process and Administration of an Energy Efficiency Utility Order of Appointment* (Appendix B.4): Efficiency Vermont submits its *2020 Annual Report* to the Vermont Public Utility Commission and the Vermont Department of Public Service in fulfillment of its energy efficiency utility annual reporting requirements.

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# **1. OVERVIEW**

# 1. OVERVIEW

## 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 Vermont Public Utility Commission (“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. In 2020, Vermont was ranked third in the 2020 State Energy Efficiency Scorecard,<sup>1</sup> and is consistently recognized as one of the nation’s top states for its leadership in energy efficiency policies and programs, including Efficiency Vermont.

## 2020 SUMMARY

In 2020, the third year of the three-year (2018–2020) performance period, Efficiency Vermont was privileged to help more than 57,201 Vermonters with objective guidance to improve the affordability and comfort of their homes, businesses, institutions, and communities with energy efficiency. 2020 introduced unprecedented challenges due to the COVID-19 pandemic and State of Emergency (“COVID-19”). Efficiency Vermont rapidly adapted 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 \$172,101,197 over the lifetime of the 2020 investments<sup>2</sup> 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 (the statewide network of installers, designers, builders, and architects—trained to deliver the highest-quality efficiency 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, while helping the state achieve its clean energy and climate goals.

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<sup>1</sup> American Council for an Energy Efficient Economy (ACEEE), 2020 State Energy Efficiency Scorecard, <https://www.aceee.org/state-policy/scorecard>.

<sup>2</sup> 2020 investments factored into the lifetime savings calculation include the following costs: a) Efficiency Vermont costs: \$55,668,646 (includes Resource Acquisition, Development and Support Services, and Performance Incentive costs); b) Customer costs: \$32,988,156; and 3) Department of Public Service evaluation and other costs, \$2,519,227.

In 2020, the role of engagement took on increasing importance. As the stay-at-home guidelines in the COVID-19 State of Emergency took effect, Efficiency Vermont saw a 70% decline in engagement with Customer Support and a 40% decline in website users at its lowest point in early April. Many usual in-person engagement methods (like trade shows and home/business energy consultations) were no longer available. In response, Efficiency Vermont developed a digital engagement strategy to raise awareness of offers that could help COVID-impacted Vermonters, and provide digital content to inspire and educate actions and solutions that could be done at home and in businesses.

This strategy included the development of engaging digital tools and content for the Efficiency Vermont website, local online public forums, launching virtual home energy visits, social media, monthly eNewsletters, and in some instances, articles in local papers. As a result, website traffic and call center engagement quickly rebounded. Visits to the Efficiency Vermont Marketplace (where Vermonters can research and compare products, read reviews, and find rebates) increased steadily throughout the year, with Q4 2020 visits nearly five times higher than visits in Q4 2019. Over 25,000 Vermonters received 245,370 eNewsletters, (with subscribers increasing by 57% since 2019). Efficiency Vermont switched to virtual trainings and events in March 2020 to maintain contact with contractors and customers, and to keep contractors engaged during the shutdown. Despite the shutdown, Efficiency Vermont staff led over 100 trainings and events with over 7,000 total attendees in 2020. The large majority of these were virtual events. In total, the 2018-2020 performance period saw an 186% increase in unique visitors to the core Efficiency Vermont site, as compared to the previous performance period (2015-2017).

In 2020, additional to the activities approved by the Commission in Case No. EEU-2016-03 regarding Efficiency Vermont's 2021-2023 Demand Resources Plan ("DRP"), Efficiency Vermont:<sup>3</sup>

- Developed and administered the K–12 Schools Indoor Air Quality (IAQ) Grant Program to make heating, ventilation and air conditioning improvements to support indoor air quality and health in 311 schools in 2020. This program was federally funded with Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") funds. See Section 2.3.3 *K-12 Schools* for more information.
- Supported the Vermont Department of Labor unemployment call center by providing Efficiency Vermont staff to answer Vermonters' calls.
- Fully expended Act 62 weatherization funds (incremental to existing TEPF funds) through incentives for comprehensive weatherization projects, with higher incentives for moderate-income customers. This program enabled Efficiency Vermont to quadruple the number of projects completed in August 2020 over what was completed in August 2019. See Section 3.1.2 *Single-Family Homes—Act 62 Funding* for more information.

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<sup>3</sup> The costs and any associated benefits of these additional activities are separate from Efficiency Vermont's spending and savings performance relative to its DRP approved budgets and QPI goals. .

## 2020 SAVINGS

Due to the program, budget, and market impacts as a result of COVID-19, the Commission approved adjustments to Efficiency Vermont’s 2018-2020 Quantitative Performance Indicators (“QPIs”).<sup>4</sup> Efficiency Vermont’s spending and performance towards its 100% goals as provided in this report are relative to the approved adjusted 2020 budget and 2018-2020 Quantitative Performance Indicators (“QPIs”) and Minimum Performance Indicators (“MPRs”) issued by the Commission.

Across all of its energy reduction goals, both electric and TEPF, Efficiency Vermont achieved savings results of at least 99% compared to its 100% goals. Electric QPIs #1 through #5 were between 99% and 104% achievement, with an average of 101%; and TEPF QPI #1 achieved 102% of the 100% goal. The electric efficiency results were achieved without any contributions toward QPIs from the Energy Savings Account (“ESA”) pilot, as no ESA projects were completed during 2019-2020 so there were no savings reported..

Figure 1 illustrates Efficiency Vermont’s 2018-2020 savings results toward its 100% energy-related QPI targets.



Figure 1. Efficiency Vermont’s 2018-2020 savings results toward its 100% energy-related QPI targets.

<sup>4</sup> Case No. EEU-2016-03, Vermont Public Utility Commission, *Order Approving Changes to Efficiency Vermont Budgets and Goals for the 2018-2020 Performance Period*, October 29, 2020. Efficiency Vermont’s spending and performance, as provided in this report, is relative to the approved adjusted budgets and goals issued by the Commission in this Order.

## ELECTRIC EFFICIENCY

Through 2020, the last year in the 2018-2020 performance period, Efficiency Vermont achieved its three-year goals and came in significantly under its three-year budget<sup>5</sup>. For the three-year period, Efficiency Vermont generated savings of 355,764 megawatt hours (MWh), or 104% of the 100% MWh target. In 2020, Efficiency Vermont spending was \$41,433,925<sup>6</sup> or 6% below the electric resource acquisition (RA) budget for the year.<sup>7</sup> The vast majority of 2020 MWh savings came from investments in two major markets: the business existing facilities market with 61,034 MWh, or 61% of total electric MWh savings; and the residential efficient products market with 31,442 MWh, or 32% of total electric MWh savings.

Figure 2 shows 2020 electric RA spending by major market.<sup>8</sup> Figure 3 shows 2020 MWh savings by major market. [See Sections 2-4 for RA program highlights, and Section 5 for Development and Support Services (DSS) program highlights.]

2020 Spending (Electric RA)

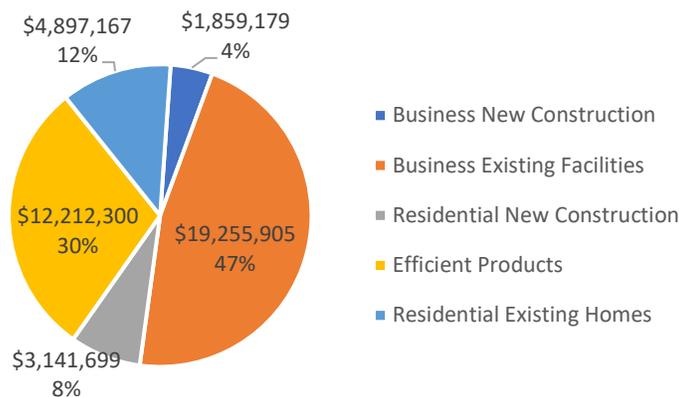


Figure 2. 2020 electric RA spending by major market

2020 Savings (MWh)

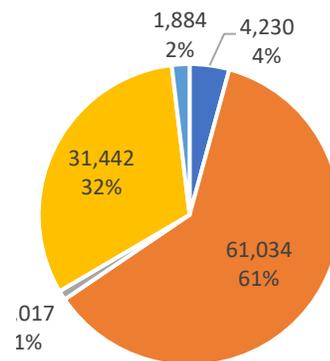


Figure 3. 2020 electric savings (MWh) by major market

## THERMAL ENERGY AND PROCESS FUELS EFFICIENCY

Through 2020, the third year of the 2018-2020 performance period, Efficiency Vermont generated savings of 397,947 million British thermal units (MMBtu), or 102% of the MMBtu target, while spending 99% of the three-year budget. In 2020, Efficiency Vermont spending was \$8,614,630<sup>9</sup> or 100% of the TEPF RA budget. 2020 MMBtu savings came from RA investments in three major markets: the business existing facilities market with 35,799 MMBtu, or 39% of total TEPF MMBtu savings; efficient products with 37,845 MMBtu, or 41%; and existing homes with 18,405 MMBtu, or 20%. TEPF MMBtu savings included projects

<sup>5</sup> Efficiency Vermont saved \$4,414,247 in electric efficiency funds in 2018-2020; 49% or \$2,164,247 of that was returned to ratepayers through rate reductions in 2019, 2020, and 2021; 51% or \$2,250,000 of that was redirected through Legislative Act 62 to provide Efficiency Vermont weatherization services to moderate-income Vermonters in 2019-2020.

<sup>6</sup> Includes operations fee.

<sup>7</sup> The 2020 electric RA budget was 94% spent, as only 3% (or \$67,673) of the 2020 budget for the Energy Savings Account pilot (or \$2,550,000) was spent in 2020.

<sup>8</sup> The spending values reported in Figure 2 include the operations fee. ESA spending is not included.

<sup>9</sup> Includes operations fee.

funded solely by TEPF funds, and projects co-funded by a combination of TEPF and Act 62 Weatherization Grant funds. Figure 4<sup>10</sup> shows 2020 TEPF major market RA spending.<sup>11</sup> Figure 5 shows 2020 TEPF major market MMBtu savings. (See Section 2-4 for RA program highlights, and Section 5 for DSS program highlights.)

2020 Spending (TEPF RA)

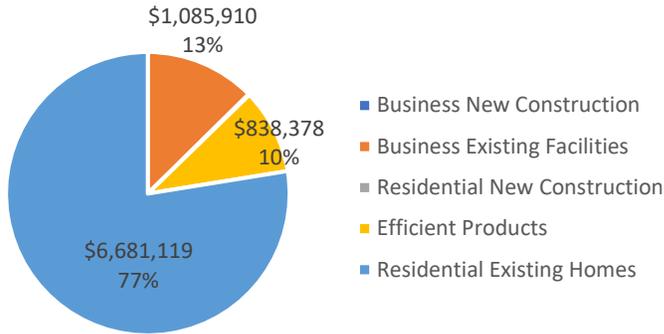


Figure 4. 2020 TEPF RA spending by major market

2020 Savings (MMBtu)

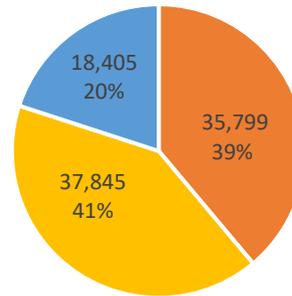


Figure 5. 2020 TEPF savings (MMBtu) by major market

<sup>10</sup> The spending values reported in Figure 4 include the operations fee.

<sup>11</sup> TEPF Residential New Construction spending in 2020 was \$9,222, or less than 0.1% of total TEPF spending for the year. It does not show up in Figure 4 because the figure rounds to the nearest 1%.

## **SECTIONS 2 - 5. 2020 SERVICES**

## 2020 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, and municipal facilities.

### 2. SERVICES FOR BUSINESS CUSTOMERS

#### 2.1 BUSINESS EXISTING FACILITIES

This category includes commercial, industrial, institutional, and municipal facilities. Efficiency Vermont provided electric and thermal energy and process fuels (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 business existing facilities and business new construction).

#### 2.2 BUSINESS NEW CONSTRUCTION

Efficiency Vermont's support for the creation of efficient new buildings continued to focus primarily on the professionals engaged in architectural design and construction. These individuals included 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. Efficiency Vermont recognized and publicized exceptional achievement in new construction through its annual *Best of the Best* awards.

Efficiency Vermont provided energy efficiency training and information to professionals and tradespeople involved in construction and renovation projects through the EEN and through the Energy Code Assistance Center and annual Better Buildings by Design Conference (BBD, discussed in Section 5.1.4) and through video-based training on [www.encyvermont.com](http://www.encyvermont.com).

Additionally, Efficiency Vermont:

- Partnered with the New Buildings Institute to complete an analysis of a thermal energy storage system to be installed in a new academic building in Vermont.
- Continued to support customers and building professionals in the design and construction of new energy-efficient commercial buildings. Efficiency Vermont completed 43 projects, including 13 high-performance projects and one net-zero

project.

See Section 2.3 for information about crosscutting services for business new construction and business existing facilities.

## **2.3 CROSSCUTTING SERVICES FOR EXISTING FACILITIES AND NEW CONSTRUCTION**

### **2.3.1 VERMONT'S LARGEST ENERGY USERS**

To serve the state's largest energy users—defined by their use of more than 500 MWh of electricity per year—Efficiency Vermont continued to take a customized approach. Efforts to reduce energy use and costs in this sector are detailed below.

Designated Efficiency Vermont staff maintained long-term proactive professional relationships with individual businesses. To design and deliver effective, customized services, Partner and Customer Engagement (PACE) representatives and Efficiency Vermont's Energy Services team maintained a deep understanding of each company's priorities and challenges. Efficiency Vermont served approximately 211 large businesses, garnering a combined expected annual savings of 27,407 MWh for these large businesses from measures completed in 2020.

Efficiency Vermont:

- Assisted the state's largest energy users as they navigated the COVID-19 pandemic and State of Emergency ("COVID-19"). Where possible, Efficiency Vermont continued to manage existing projects and identified opportunities to reduce energy use while facilities experienced downtime. Efficiency Vermont offered remote verification of projects and provided incentive advances for projects set to close in 2020.
- In anticipation of an upcoming change to Power Factor charges, teamed up with Green Mountain Power (GMP) to help numerous customers analyze their history, identify problem sites, and align resources.
- Attended the Vermont Ski Areas Association annual meeting and discussed the evolution of the snowmaking dashboard.
- Provided several new structured custom offers in order to support large energy users, including bundled incentives for dairy farms and controlled environment agriculture (see Agriculture in Section 2.3.3); enhanced offers for compressed air system leak repair (see Industrial Process Equipment in Section 2.3.4); support for controls setbacks and preventive maintenance for colleges, universities, and K–12 schools (see Colleges and Universities and K–12 Schools in Section 2.3.3); and preventive maintenance support for rooftop units.
- Completed work on Continuous Energy Improvement (CEI):
  - The wastewater treatment facilities (WWTF) cohort held 7 virtual trainings. A total of approximately 360 MWh savings were observed for four of the five participants. Additionally, the Vermont Agency of Natural Resources approved up to 21.5 Continuing Education Credits for Wastewater Pollution Abatement Facility Operators based on Efficiency Vermont's CEI curriculum,

for accreditation by the Vermont Secretary of State - Office of Professional Regulation.

- The colleges cohort had 5 trainings with 5 schools. Three colleges remained in the cohort following COVID-19-related campus closures. CEI interns for the colleges presented on their project scope, methods, findings, and takeaways. Two colleges held dorm competitions, and the third college targeted laboratory sashes. Due to drastic changes in occupancy from campus closures and reduced operations, savings came from controls setbacks projects, and the CEI program design was scaled back accordingly.
- A representative from the CEI hospital cohort presented at the Best Practices Exchange.

### 2.3.2 SMALL AND MEDIUM-SIZED BUSINESSES (SMBs)

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 market initiatives (discussed in Section 2.3.3).

Efficiency Vermont:

- Performed 187 business energy walk-throughs to identify energy efficiency opportunities and help business customers navigate Efficiency Vermont's rebates and services. In the early part of the year, COVID-19 halted in-person visits temporarily. Efficiency Vermont staff began working from home in March and transitioned to phone and video chat outreach to business customers. In-person walk-throughs resumed in the summer in compliance with State guidelines, but were paused again in October as community spread began to rise again.
- Logged over 1,000 interactions (such as emails and phone conversations) between SMB account managers and 440 unique customers. This volume of interactions is more than twice that of a typical year.
- Conducted walk-throughs at food shelves as part of a targeted effort in concert with the Vermont Foodbank to offer support and services to its food shelf partners.
- Conducted targeted outreach and education programs and increased incentives aimed at further supporting 501(c)(3) nonprofits that provided critical services to vulnerable populations during the COVID-19 State of Emergency.
- Launched a nonprofit bonus offer of up to \$10,000 to cover up to 90% of project costs for nonprofit organizations providing a health, safety, or welfare service to the 2020 Targeted Communities.<sup>12</sup> Eligible nonprofits could access the offer for one efficiency project.
- Offered a business bonus equal to an extra 20% in incentives, up to \$1,000 per customer, for business customers of any size in the 2020 Targeted Communities.
- Sent a targeted mailer to approximately 250 small grocery and convenience stores, which generated activity and increased call volume related to Efficiency Vermont's refrigerant leak repair program.

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<sup>12</sup> Targeted Communities in 2020 were Island Pond (Island Pond, Brighton), Irasburg (Irasburg, Barton, Orleans), Johnson (Johnson Village and Town), and Barre City.

### 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, colleges and universities, hospitals and healthcare, K–12 schools, municipalities, ski areas, and state buildings. Activities in selected targeted markets follow.

#### **Agriculture**

Efficiency Vermont:

- Partnered with a local engineering firm to peer-review a crash cooling system drawing, which was shared with the Agency of Agriculture to distribute to dairy farmers who wanted to design and build such an efficient system
- In partnership with the Vermont Public Power Supply Authority (VPPSA), increased the incentive for installing ventilation equipment with variable frequency drive (VFD) technology for dairy farmers.
- To assist farms in recovering from the economic downturn due to COVID-19, which hit the agricultural sector especially hard, leveraged a partnership with the Vermont Agency of Agriculture, Food, and Markets; the Northeast Organic Farming Association of Vermont; and the University of Vermont Extension. This effort focused on the following tailored offerings:
  - Dairy Farms: Tailored offerings designed to save energy while improving milk quality included increased incentives for ventilation fans, heat recovery units, plate coolers, and high-efficiency milk cooling systems.
  - Controlled Environment Agriculture (or “Indoor Agriculture”): Tailored offers continued incentives for controls, greenhouse coverings, pipe insulation, LED grow lights, heating system upgrades, and hemp drying and processing equipment.

#### **Colleges and Universities**

Efficiency Vermont:

- Provided targeted outreach and education through its custom program to aid colleges and universities whose campuses closed as a result of COVID-19. This included offers for evaluation of controls setpoints and set back mechanical systems to match occupancy and incentives to enter into a controls preventive maintenance contract. Additionally, three colleges were able to adapt to a virtual model for the CEI program. See Continuous Energy Improvement in Section 2.3.1 for additional updates.

#### **Hospitals and Healthcare**

(See the CEI activities in Section 2.3.1.)

#### **K–12 Schools**

Efficiency Vermont:

- Produced the K–12 standard offers sell sheet, a promotional packet for customers,

and shared it with partners.

- Account managers performed outreach to conduct walk-throughs of school facilities.
- Provided targeted outreach and education through its custom program to aid K–12 schools whose facilities first closed due to COVID-19, and then gradually reopened.
- In support of COVID-19 response efforts, with an \$18,000,000 CARES Act Grant, helped schools coming into the 2020–2021 school year upgrade HVAC systems and controls to maximize indoor air quality. 365 schools participated in the program (nearly 90% of all eligible schools in the state).
  - 304 of those participating schools received funding for HVAC projects as well as at least one indoor air quality monitor.
  - An additional seven schools received project funding, but no monitor, bringing the total number of schools that completed projects in 2020 to 311.
  - An additional 54 schools received a monitor, but no project funding.

### **Municipalities (including WWTF)**

Efficiency Vermont:

- Launched a municipal bonus offer of up to \$4,000 to cover up to 100% of project costs for municipalities in the 2020 Targeted Communities. (See more information on Targeted Communities in Section 4.3.)
- Participated in energy upgrades at several WWTF sites in response to a surge in applications to the State for Clean Water State Revolving Fund projects. See Continuous Energy Improvement in Section 2.3.1 for additional updates.

### **Ski Areas**

Efficiency Vermont:

- Provided independent snow gun testing for multiple manufacturers at the National Ski Areas Association Eastern Winter Conference to inform ski areas' purchasing decisions, optimize snowmaking strategies, and improve snow gun design.
- Provided support to ski areas in developing capital plans, including purchases such as snow guns and compressors. Efficiency Vermont also worked with utilities to identify Tier III<sup>13</sup> projects at ski areas.

### **State Buildings**

Efficiency Vermont continued to coordinate with the Vermont Department of Buildings and General Services (BGS) on the State Energy Management Program (SEMP).

- The participation of BGS in the flexible load management (FLM) program was a major success for State government. The Waterbury State Office Complex participated through HVAC on-demand rescheduling. After these successful initial trials, the commissioner requested standardized load reduction schedules.
- BGS performed energy audits on State-owned facilities to maintain a robust pipeline of energy conservation projects.

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<sup>13</sup> 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 greenhouse gases attributable to that consumption.

- A new energy project manager was hired by the State in mid-June. Efficiency Vermont assisted BGS in achieving its HVAC performance and monitoring objectives to safely reopen essential State buildings during COVID-19.
- BGS and Efficiency Vermont submitted the 2020 annual report for the State Energy Management Program, which includes project highlights for fiscal year 2020.
- Several buildings in the Capitol Complex received energy audits, but due to COVID-19 restrictions some projects were put on hold due to challenges of maintaining appropriate safe distances from essential workers while conducting project work.

#### 2.3.4 KEY COMMERCIAL TECHNOLOGIES

Efficiency Vermont continued to maintain awareness of efficient technologies that could provide significant benefits in commercial applications and engaged in efforts to bring these benefits to Vermont’s commercial sector. Efficiency Vermont’s work in 2020 included the activities highlighted below. Also, see Heating, Ventilation, Air Conditioning, and Refrigeration (HVAC-R) in Section 4.7.

##### **Combined Heat and Power (CHP)**

Efficiency Vermont engaged more than 20 farmers to build interest in installing approximately 30 small-scale anaerobic digesters in the state over the next two or three years. This pilot program moved forward with market testing, but due to COVID-19 work in the area was limited.

##### **Commercial Lighting**

Efficiency Vermont:

- Decreased rebates in various categories in response to rapidly changing market conditions.
- Updated the Technical Reference Manual (TRM) to drastically streamline measure codes, increasing operational efficiencies.
- Presented at the 2020 BBD conference on commercial controls integration and controlled environment agriculture grow lighting.
- Presented on grow lighting program design at the Indoor Agriculture Energy Solutions conference in San Diego, California, in February.
- During the governor’s “Stay Home, Stay Safe” order, offered remote trainings for partners and staff. This included a new self-guided online training course on networked lighting controls. Efficiency Vermont also provided training for a distributor on controlled environmental agricultural lighting, at the distributor’s request.

##### **Industrial Process Equipment**

The compressed air leak audit incentive was enhanced to assist with COVID-19-related economic recovery efforts. Audit and repair costs could be fully reimbursed (up to \$9,000 per customer) if at least 50% of identified leaks were repaired.

## 3. SERVICES FOR RESIDENTIAL CUSTOMERS

### 3.1 EXISTING MARKET RATE HOMES

#### 3.1.1 SINGLE-FAMILY HOMES

Efficiency Vermont:

- Began offering virtual home energy visits in the 2020 Targeted Communities when all fieldwork was suspended owing to COVID-19, renaming them “home energy consultations.”
- Offered a do-it-yourself (DIY) rebate program for homeowners installing window replacements and window inserts.
- For Zero Energy Now (ZEN), a program whose goal is eliminating fossil fuel use in existing buildings, analyzed project savings data, collaborated on demonstrations of potential modeling tools, met with the Building Performance Professionals Association of Vermont (BPPA) and the Northeast Energy Efficiency Partnership (NEEP) to better understand how the ZEN model could be adapted to meet other states’ needs, and continued supporting BPPA in its implementation planning.
- Completed 1,051 Home Performance with ENERGY STAR® projects; 609 (58%) were for middle-income customers.<sup>14</sup>
- Completed 63 prescriptive attic and basement projects; 31 (49%) were for middle-income customers. This program was subsequently discontinued due to lower participation, low customer interest, and increased focus on comprehensive weatherization with Building Performance Institute (BPI) certified contractors.<sup>15</sup>
- Transitioned from the HERO audit tool to the Online Rebate Center (ORC) for project submittal and reporting by contractors. This change reduced the administrative burden on contractors, customers, and Efficiency Vermont staff.
- Held weekly virtual meetings with Home Performance with ENERGY STAR contractors to identify the impact of COVID-19 on contractor business models, better understand needs and supply chain breaks, and share information and reopening schedules.
- Launched a virtual Efficiency Excellence Network (EEN) Healthy Homes contractor training.
- Suspended (due to COVID-19) and then resumed the indoor air quality monitor loan program.
- Collaborated with Vermont Electric Cooperative (VEC) and GMP to distribute peak event announcements (or “behavioral messaging”) through home energy monitors. Efficiency Vermont explored the influence of in-app push notifications (or “nudges”) on device-level response in an effort to leverage distributed assets, provide additional energy literacy opportunities, and enhance users’ agency over energy demand for grid optimization. Customers had a 90% satisfaction rate with the pilot, and 89% were interested in receiving similar peak notifications in the future. No participants opted out of the pilot.

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<sup>14</sup> This work was funded by both TEPF and Act 62 funds.

<sup>15</sup> Id.

- Promoted Home Performance with ENERGY STAR via broadcast TV, streaming video, digital radio / audio, print, Facebook, and digital display ads. Campaigns resulted in 200 Facebook engagements (reactions, comments, or shares), about 9 million media impressions, 140,000 YouTube video views, and 54,000 visits to [www.encyvermont.com](http://www.encyvermont.com).
- Recorded 12,652 DIY rebate page views, 7,738 home energy assessment page views, and 44,682 Home Performance with ENERGY STAR rebate page views.
- Reached over 150,000 total Vermont households through targeted direct mail campaigns in January and July, resulting in more than 2,600 incoming contacts to the Contact Center.

### 3.1.2 SINGLE-FAMILY HOMES—ACT 62 FUNDING<sup>16</sup>

#### Efficiency Vermont:

- Completed 609 Home Performance with ENERGY STAR projects for moderate-income customers.
- Completed 31 attic and basement weatherization projects for moderate-income customers.
- Enrolled 14 new Home Performance with ENERGY STAR contractors in the EEN.
- Added 35 BPI building analyst contractors to the EEN Home Performance with ENERGY STAR trade group.
- Executed contract with NeighborWorks of Western Vermont to act as a general contractor to help provide comprehensive weatherization services to underserved areas by partnering with local out-of-network (non-EEN) contractors.
- Increased middle-income incentives from 50% of project cost up to \$4,000, to 75% of project cost up to \$5,500.
- Completed 640 middle-income projects (57% of 1,114 total projects).
- Leveraged Act 62 funds for the Home Energy Loan Coverage Payment Offer and interest rate buy-downs on Home Performance with ENERGY STAR project loans for income-eligible customers (see Section 4.4 for more information on financial services).

## 3.2 EXISTING AND NEW LOW-INCOME HOUSING

Efficiency Vermont undertook its efforts in service to low-income households in collaboration with long-standing partners: 1) low-income housing and service providers, including agencies of Vermont’s Weatherization Program and 3E Thermal; 2) affordable housing funders, including the VHCB and the VHFA; and 3) multifamily housing developers, including Housing Vermont. In 2020, Efficiency Vermont engaged in the activities described below.

### 3.2.1 EXISTING LOW-INCOME HOUSING (SINGLE-FAMILY)

- A total of 1,011 customers redeemed appliance replacement vouchers.
- All Weatherization Assistance Program partners signed a new contract to complete

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<sup>16</sup> Act 62 weatherization funds were incremental to existing TEPF funds, and cofounded comprehensive weatherization projects, specifically supporting financial incentives for moderate-income customers.

Low-Income Electrical Efficiency Program (LEEP) work for a historic number of program applicants in 2020.

- Targeted high use (THU) and LEEP visits were temporarily suspended due to COVID-19, as was delivery and installation of new appliances and wood / pellet stoves for the low-income voucher programs. When weatherization agencies and retailers returned to the field to continue these services, they doubled their monthly visits for THU to make up for lost time; however, the impacts of COVID-19 were felt for the year as a whole, particularly in continuing supply chain delays, resulting in lower-than-expected activity for the year.

### 3.2.2 EXISTING LOW-INCOME HOUSING (MULTIFAMILY)

- Efficiency Vermont's retrofit contractor (3E Thermal) conducted retrofit projects in accordance with State guidance concerning COVID-19.
- Efficiency Vermont provided substantial technical assistance (including code guidance / support and review of project-related submittals for HVAC, thermal shell, plumbing, and lighting) for a project funded through coronavirus relief funds distributed by the Vermont Housing and Conservation Board (VHCB).

### 3.2.3 NEW LOW-INCOME HOUSING (SINGLE-FAMILY)

Efficiency Vermont:

- Safely implemented a remote inspection option to allow continued program operation during COVID-19.
- Received final survey responses for the 2019 Energy Choices program and considered them in a program evaluation.
- Provided an all-electric bonus incentive to encourage customers to pursue net-zero-readiness of their homes.
- Provided significant technical advice and expertise to a builder constructing eight Zero Energy Modular (ZEM) homes in three towns with the support of coronavirus relief funds distributed by the VHCB to address immediate housing needs due to the pandemic.

See Section 3.3.1, Residential New Construction (Market Rate), Single-Family Homes. The program highlights reported in that section are also applicable to New Low-Income Housing, Single-Family Homes.

### 3.2.4 NEW LOW-INCOME HOUSING (MULTIFAMILY)

Efficiency Vermont:

- Worked with a home manufacturer in Maine intending to build ZEM homes for income-eligible customers in Vermont.
- Assisted Housing Vermont with the design of two new housing projects: one for 18 units in White River Junction and one for eight units in Wilder.
- Assisted with a low-income, all-electric multifamily building whose builders wanted to use AeroBarrier in its air sealing.
- Assisted with a four-story, 30-unit building featuring balanced heat recovery ventilation in St. Albans. The final blower door test was equivalent to the Passive House standard.

### **3.3 RESIDENTIAL NEW CONSTRUCTION (MARKET RATE)**

Efficiency Vermont's support for the creation of efficient new buildings continued to focus primarily on the professionals engaged in architectural design and construction. These individuals included 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 homeowners who preferred to engage directly rather than through their builders. Efficiency Vermont recognized and publicized exceptional achievement in new construction through its annual Best of the Best awards.

Efficiency Vermont provided energy efficiency training and information to professionals and tradespeople involved in construction and renovation projects through: 1) the EEN (discussed in Section 4.2.1); 2) the Energy Code Assistance Center (discussed in Section 5.1.1); 3) the BBD Conference (discussed in Section 5.1.4); and 4) video-based training on [www.encyvermont.com](http://www.encyvermont.com). Efficiency Vermont offered technical guidance, financial assistance, and energy rating services in alignment with ENERGY STAR, Leadership in Energy and Environmental Design (LEED), the National Green Building Standard, and net-zero-ready standards.

#### **3.3.1 SINGLE-FAMILY HOMES**

Efficiency Vermont:

- Updated its baseline for savings claims, effective at the start of 2020.
- Conducted both thermal enclosure inspection and final inspection remotely while physical site visits were disallowed owing to COVID-19.
- Completed two off-grid projects: one Efficiency Vermont 2.0 certified and one High Performance Home 2.0.
- Continued to promote the benefits of meeting program requirements and attempted to move the market toward higher-performing buildings. Most builders working with Efficiency Vermont improved their building practices such that they met and exceeded code.
- Discontinued the fee-for-service technical assistance for customers not meeting program requirements and requesting more than three hours of technical assistance, because participation was low. Should a builder wish to obtain third-party certifications, consultants are available in Vermont to help. Residential new construction customers could continue to receive technical support by calling or emailing Efficiency Vermont.
- Secured the enrollment of a development with 63 single-family homes in South Burlington.

#### **3.3.2 MULTIFAMILY HOMES**

Efficiency Vermont:

- Completed a 30-unit project involving continuous insulation and an unusual installation of air source heat pump condenser units on the interior of parking garage

walls.

- Completed a project with a private developer who had never before done a multifamily project with Efficiency Vermont.
- Completed a project with a longtime Efficiency Vermont client whose past projects had met the certified level only. This was the first high performance–level project the developer elected to pursue. Efficiency Vermont partnered with Vermont Gas Systems (VGS) on the per-dwelling unit incentive.
- Provided technical assistance concerning the insulation and air sealing of a proposed wall and ceiling assembly. Additionally, Efficiency Vermont provided technical assistance with respect to the importance and value of a balanced heat recovery system, which was installed.

### **3.4 RETAIL EFFICIENT PRODUCT SERVICES**

Efficiency Vermont’s services were designed to increase availability and knowledge of quality efficient products and to reduce their purchase costs in order to motivate Vermonters to select efficient models of products for their homes and businesses. Efficiency Vermont provided support for consumer products that met or exceeded efficiency standards set by the Environmental Protection Agency’s (EPA’s) ENERGY STAR program, including lighting, appliances, heating and cooling equipment, dehumidifiers, pool pumps, electronics, and smart thermostats. An essential element of Efficiency Vermont’s efforts continued to be services to retailers and to partners in the product supply chain to ensure the availability of high-quality efficient products in Vermont stores. Support included rebates, buy-downs, and markdowns at the manufacturer and retail level as well as services described in Section 4.2, Services to Contractors and Equipment Suppliers.

Efficiency Vermont also 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 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.

Efficiency Vermont:

- Adjusted markdowns on qualifying fixtures to align with market activity.
- Discontinued incentives on non-connected screw-based lighting as planned.
- Hosted bulb turn-in events at retailers across Vermont.
- Collaborated with distribution utilities (Tier III) in a joint downstream heat pump water heater (HPWH) rebate program.
- Published the “Watts New” consumer e-newsletter.
- Opened the ENERGY STAR Retail Products Platform (ESRPP) to online sales, providing support for retailers that relied upon online sales to maintain economic viability.
- Provided a no-contact, curbside appliance recycling offer from May through August for recycling working refrigerators, freezers, room air conditioners, and dehumidifiers. The deadline was extended in response to COVID-19 because of the contact-free nature of the service. The offer was extremely popular; more than 1,000 old, inefficient appliances were recycled in 2020.

- Provided a \$50 rebate for ENERGY STAR appliances related to health and safety (freezers, room air conditioners, dehumidifiers, air purifiers, and indoor grow lights) to low-income and middle-income customers. .
- Increased pool pump incentives for both above-ground pumps and in-ground pumps. However, due to a change to the ENERGY STAR specifications standards, Efficiency Vermont discontinued both pool pump incentives on December 31, 2020.
- Ran an air conditioner giveaway on social media that reached 262,065 Facebook users in Vermont and had nearly 4,000 unique engagements (comments, reactions, and clicks). One winner was chosen at random to receive an ENERGY STAR Most Efficient window air conditioner.
- Launched a Marketplace video that received thousands of views on YouTube and dramatically increased unique visits to the Efficiency Vermont Marketplace (<https://marketplace.encyvermont.com/>). In the first month, unique visits to the Marketplace went up 142%, page views went up 76%, and page views per visit went up 30%.
- Maintained retail market activity. Online Marketplace metrics indicated increased consumer interest in efficient products as the year went on.

#### **4. ACTIVITIES IN SERVICE TO ALL MAJOR MARKETS**

While serving specific markets, as described above, Efficiency Vermont also provided services that had an impact on multiple sectors. A key element of this cross-sector approach was Efficiency Vermont’s ongoing coordination with the businesses that Vermonters turn to for efficient products and services. These partnerships, although not always evident to the general public, 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. These partnerships enabled Vermont homes and businesses to have access to a valuable network of knowledgeable providers while strengthening these providers’ businesses.

Included in this section are the results of Efficiency Vermont’s annual brand awareness survey. See Section 4.8 for more information.

In addition to the activities outlined below, additional efforts made alongside these partners in various initiatives appear in other sections throughout this report.

##### **4.1 COORDINATION WITH ENERGY EFFICIENCY UTILITIES AND DISTRIBUTION UTILITIES**

Efficiency Vermont participated in a number of broad partnership efforts with distribution utilities including:

- *Tier III program support:* Efficiency Vermont expanded its C&I collaboration efforts from commercial and industrial customer (C&I) customers to also include more prescriptive midstream and downstream rebate programs for both residential and SMBs.

- *HPWH program:* Efficiency Vermont transitioned all fossil fuel savings from HPWHs to distribution utility partners, except for VEC.<sup>17</sup>
- *Communication:* As Efficiency Vermont adjusted programs to meet customer needs during COVID-19, communication with utility partners focused on sharing information about program adjustments, providing insights from the field, and finding collaboration opportunities to meet near-term and long-term goals. Examples included customer and partner insights weekly reports; weatherization summits of the three Energy Efficiency Utilities, or EEU (Burlington Electric Department [BED], VGS, and Efficiency Vermont); a workshop on engaging low-income customers; a COVID-19 recovery utility partner summit; and discussion with distribution utilities of stimulus and recovery programs.
- *Program planning and implementation:* In October, Efficiency Vermont began convening meetings with all distribution utility and EEU partners to further improve program planning and implementation. These group discussions provided a forum for sharing program forecasts, insights, and best practices, and helped the participants with long-term collective strategizing. This group met on average every month, with an agenda developed by Efficiency Vermont but informed by the entire group.
- *EEU coordination:* Program coordination among the three EEU increased in the second half of 2020. Initially spurred by the parties' responses to the economic downturn caused by COVID-19, the meetings also better aligned program offerings such as weatherization services, C&I outreach, and the contractor and supplier network.
- *Distribution utility coordination:* Efficiency Vermont's partnership with distribution utilities varied in scope to meet individual needs. One-on-one engagement with distribution utility partners was an essential component of Efficiency Vermont's partnership, along with group-wide collaboration and Tier III support. Examples included weekly meetings with GMP and VPPSA to share leads and jointly support projects. Targeted C&I outreach efforts continued with VEC in the areas of controlled environment agriculture and industrial customers to incorporate efficiency and electrification, with a strong focus on remote, rural operations that might not have historically received services. VPPSA and Efficiency Vermont also signed a joint memorandum of understanding (MOU) that committed the parties to an agreed-upon level of collaboration and service delivery. This effort laid the groundwork to meet the needs and unique challenges of rural and small municipal utilities.

## 4.2 SERVICES TO CONTRACTORS AND EQUIPMENT SUPPLIERS

### 4.2.1 THE EFFICIENCY EXCELLENCE NETWORK (EEN)

Efficiency Vermont:

- Hosted a booth at the BBD conference and offered six manufacturer-led sessions and multiple one-on-one consultation sessions to attendees.

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<sup>17</sup> VEC continued to collaborate with and leverage Efficiency Vermont's program and supply partner support, but opted to continue providing its downstream bill credit.

- Partnered with Vermont Technical College to provide free BPI Building Analyst trainings and exams.
- Offered a full-day training for the refrigerant leak detection and repair pilot program; loaned leak detection equipment to participating contractors.
- Switched from in-person trainings to virtual trainings in response to COVID-19. Partnered with manufacturers, distributors, and organizations to deliver or promote 57 live webinars and prerecorded sessions. Added 10 recorded trainings to the Efficiency Vermont website, including three on residential building energy standards (RBES).
- Experienced an overall EEN membership increase of 46.7% from January to December. Increased the enrollment of centrally ducted heat pump contractors and Home Performance with ENERGY STAR contractors, and added an option for commercial kitchen equipment dealers to join EEN's midstream group.
- Released its annual EEN member survey, which showed a 90% satisfaction rate with the network.
- Partnered with ReSOURCE YouthBuild to develop and support a Weatherization 101 course, which was delivered in late 2020.
- Launched a contractor group to help support Efficiency Vermont's administration of the K–12 Schools Indoor Air Quality (IAQ) Grant Program.
- Launched a balanced ventilation contractor group in late 2020.

#### 4.2.2 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. Efficiency Vermont was able to inform business customers about best practices via these trusted channels and targeted messaging resonating with each market's priorities.

### 4.3 COMMUNITY-BASED ACTIVITIES

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

- Conducted outreach and engagement efforts in the Efficiency Vermont 2020 Targeted Communities of Island Pond (Island Pond, Brighton), Irasburg (Irasburg, Barton, Orleans), Johnson (Johnson Village and Town), and Barre City. Partners for 2020 efforts included the Vermont Council on Rural Development, Johnson Electric, Orleans Electric, GMP, VEC, VPPSA, Barre Energy Committee, and leadership of the towns.
- Designed an effort in Enosburg focusing on agricultural technical support and incentive offerings.
- Supported the efforts of the Vermont Council on Rural Development under its Climate Change Economy Initiative to offer municipal incentives to Plainfield/Marshfield and Dorset as well as home energy visits.
- Began virtual engagement after March 13 suspension of all in-person services. Community engagement managers attended virtual public events as well as worked

with the Regional Planning Commissions to inform stakeholders of enhanced support from Efficiency Vermont. Performed virtual home energy visits (via either phone call or Internet) for Targeted Communities.

- Supported communities that moved forward with municipal projects during COVID-19, with some virtual and some in-person walk-throughs taking place.
- Launched the Button Up Vermont 2020 Campaign in September, with 50 communities participating. The campaign theme was “Neighbors Helping Neighbors,” and Button Up offered virtual home energy visits to participating towns in addition to webinars and a focus on helping customers access no-cost and low-cost measures they could take themselves. This year’s campaign hosted 21 virtual events and had 550 attendees. Ninety-one people signed up for a virtual home energy visit through the Button Up campaign. \$53,365 was raised through the Button Up Vermont Fund to help cover weatherization-related expenses for low-income Vermonters.
- In collaboration with VPPSA and the Village of Enosburg Falls Electric Department, reached out to dairy farmers about the enhanced support available to them from Efficiency Vermont.
- Worked with community leaders to identify 2020 Targeted Communities that wished to continue into 2021 due to COVID-19-related impacts; both Barre City and Brighton / Island Pond expressed an interest in continuing.
- Convened a group of external stakeholders including VGS, GMP, VPPSA, VEC, the Agency of Commerce and Community Development (ACCD), Vermont Energy and Climate Action Network, and the Vermont Natural Resources Council to select 2021 Targeted Communities. In hopes of helping the heavily impacted tourism and ski industry, the communities selected for 2021 are the Mad River Valley (Duxbury, Fayston, Moretown, Waitsfield, and Warren) and the Mount Snow Area (Dover, Wardsboro, Whitingham / Jacksonville, and Wilmington).
- Created a partner newsletter to keep partners up-to-date on the latest developments at Efficiency Vermont and to help highlight energy-saving tips and tricks.

#### **4.4 FINANCIAL SERVICES**

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

##### **4.4.1 HOME ENERGY LOAN**

A total of 860 loans to homeowners totaling \$6,805,666 in loan principal closed in 2020. The cost to Efficiency Vermont for those loans was \$701,630 in interest rate buy-down and \$130,868 in loan loss reserve deposits. Of the 860 loans closed, 27% were for low-income customers (below 80% of area median income) and 43% were for moderate-income customers (80–120% of area median income).

As part of new programming in response to COVID-19 recovery efforts, Efficiency Vermont launched the Coverage Payment Offer, in which Efficiency Vermont covered a borrower’s

first six months of Home Energy Loan payments up to \$900 to help enable customers to initiate efficiency projects and to help stimulate the economy and supply chain. Eligibility was closed off to high-income borrowers after August 31. The Coverage Payment Offer was extraordinarily popular, with a total of \$556,700 disbursed to borrowers in 2020.

#### **4.4.2 BUSINESS ENERGY LOAN**

A total of 18 loans totaling \$299,874 closed in 2020. Of the 18 loans closed, 100% were for SMB customers. Efficiency Vermont promoted the program to EEN members, helping contractors, distributors, and designers leverage financing with their customers.

To support businesses recovering from the economic impacts of COVID-19, interest rates decreased to 3.5–5.5%, and businesses were given the option to defer up to the first four months of payments, for loans approved through December 31, 2020.

### **4.5 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. In Vermont, partners included the High Meadows Fund, 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 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.

### **4.6 DATA ANALYTICS PLATFORM**

Efficiency Vermont:

- Completed communication and support activities to acquire advanced metering infrastructure (AMI) data from Vermont distribution utilities, and continued to collect, process, and store data from Green Mountain Power (GMP), Washington Electric Co-op (WEC), VEC, and Stowe Electric Department in the new data format.
- Completed work with a contractor on developing and installing a submetering platform.

### **4.7 HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION (HVAC-R)**

Efficiency Vermont:

- Migrated the qualified product list to NEEP to optimize Efficiency Vermont resources, foster regional standardization, and increase eligible products.
- Explored an integrated controls pilot between a cold climate heat pump (CCHP) and backup central heating.

- Launched the commercial refrigerant leak repair program, designed to identify and repair leaks before catastrophic system failures initiate repairs. Selected and outfitted five contractors with best-in-class leak detection equipment.
- Implemented modifications to the whole building heat pumps program to better align with market needs, including increasing support of distributed hybrid systems with integrated backup.
- Continued program planning for ground source heat pumps (GSHPs). Activities consisted primarily of extensive supply chain engagement, collaboration with distribution utilities, and evaluation of other GSHP programs.
- Provided a bonus rebate of \$200 for CCHPs and HPWHs and \$500 for centrally ducted or air-to-water heat pumps for middle-income Vermonters.
- Provided midstream rebates for reach-in refrigerators and freezers through participating commercial kitchen equipment dealers, and restricted support to best-in-class hydrocarbon refrigerant equipment.
- In partnership with BED and VGS, transitioned a suite of 12 commercial kitchen equipment measures from downstream to upstream rebates as part of a robust response to COVID-19.
- Reduced the rebate for CCHPs in August, and GMP ceased offering its COVID-19 stimulus rebates in September. These back-to-back rebate reductions led to a surge in heat pump sales, reflecting customers taking advantage of incentives before they expired. This larger-than-anticipated volume of heat pump sales in Vermont, coupled with manufacturing disruptions nationally, resulted in a shortage of available equipment for Vermonters who were purchasing the equipment in advance of availability. The “pre-bought” equipment was installed as supply caught up to demand.
- Hosted a training on a GSHP that uses an existing well to extract heat energy and can provide over 80% of a home’s heating energy. Began planning for a 2021 GSHP offer in partnership with distribution utilities, that will be available to residential, SMB, and large commercial customers.
- Partnered with a company that produces a plant-based substance used for thermal storage in space heating applications, such as air-to-water heat pumps. Provided information and technical assistance to three customers to help them incorporate this technology pairing.
- Restructured the CCHP program to align with evolving technology and market needs. The new program combined EEU and distribution utility funding to increase point-of-purchase incentives through wholesale distribution. All ducted and ductless equipment was supported through the midstream program. Incentives for ducted equipment were scaled back in response to rapid market growth, though this technology type continued to receive an incentive premium over ductless equipment.

#### **4.8 ANNUAL EFFICIENCY VERMONT BRAND AWARENESS RESEARCH**

In recognition that Vermonters fund Efficiency Vermont through the EEC, yet only some participate in programs, Efficiency Vermont fields an annual, statewide survey to understand its impact on the Vermont market outside of the traditional QPIs. This includes understanding the awareness

Vermonters have of the Efficiency Vermont brand, overall impression and value of the organization, and the Net Promoter Score (“NPS”).<sup>18</sup> Other findings include information on customer priorities, barriers, and perceptions of key interest areas such as financing and electric vehicles. Efficiency Vermont surveys residential Vermonters annually, and trade allies and business customers on alternating years. The 2020 survey included data from residential and business customers.

#### METHODOLOGY

Residential surveys were fielded to a random sample of Vermonters statewide via an online Qualtrics survey (n=359), whereas SMB surveys were administered via phone by Fifth Element Research Associates (n=211). Efficiency Vermont sponsorship was not initially revealed in either instance.

#### RESULTS

*Brand Awareness* measures the percent of customers who are aware of the Efficiency Vermont brand.

- Within the residential survey, brand awareness has been between the high 70% to mid-80% range since 2014 (the first year Efficiency Vermont conducted this survey). This year’s survey showed 79% of Vermonters were aware of Efficiency Vermont.
- 99.5% of SMBs were aware of Efficiency Vermont, which represented a significant increase, year-over-year (previous years held virtually flat at around 90% awareness)

*Brand Value Statements* help assess how Vermonters *feel* about Efficiency Vermont.

- Top performing statements for residential survey participants included “*Efficiency Vermont programs and services can help me save money*” (85% agree), “*Efficiency Vermont is an organization I trust*” (82%), and “*Efficiency Vermont cares about its customers*” (77%). “*Efficiency Vermont understands my needs and challenges*” was the lowest performing brand statement (62%).
- Top performing statements for SMBs included, “*Efficiency Vermont is an organization I trust*” (89%), “*Efficiency Vermont provides good value to Vermonters*” (87%), “*Efficiency Vermont cares about its customers*” (87%).

*Net Promoter Score* measures the willingness of customers to recommend a company to others on an index ranging from -100 to 100.<sup>19</sup> Efficiency Vermont scored an NPS of 37 for residential survey participants, and 48 for SMBs. That score puts Efficiency Vermont roughly in the 90<sup>th</sup> percentile for utilities.<sup>20</sup>

## 5. DEVELOPMENT AND SUPPORT SERVICES

Efficiency Vermont engaged in efforts that built customer awareness and knowledge; helped

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<sup>18</sup> 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.

<sup>19</sup> *Id.*

<sup>20</sup> <https://delighted.com/nps-benchmarks>

shape energy and efficiency policies; and identified approaches for optimal service development, delivery, and improvement. These efforts are essential to Efficiency Vermont's efforts to deepen energy savings and to have a lasting, positive impact on Vermont households, businesses, institutions, and communities.

## 5.1 EDUCATION AND TRAINING

### 5.1.1 CODES AND STANDARDS SUPPORT—RESIDENTIAL AND COMMERCIAL / INDUSTRIAL

Efficiency Vermont:

- Distributed 244 commercial building energy standards (CBES) books and 113 RBES handbooks .
- Through the Energy Code Assistance Center (ECAC) managed, 401 inbound and outbound residential code assistance communications, and 270 related to commercial code assistance. This included technical support, as well as support for code material and training requests.
- Offered 15 RBES trainings and seven CBES trainings.
- Launched the energy code support webpage on the Efficiency Vermont website.

### 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 2020, Efficiency Vermont's contract implementer, Vermont Energy Education Program (VEEP), enrolled 51 schools in the ELP, delivered 115 workshops to 72 schools, and sent 75 energy kits to 72 schools with continued support on curriculum development and implementation. Due to COVID-19, the majority of this work was enabled through the development of new online educational materials and virtual trainings for teachers designed to work with remote teaching, as many schools combined remote and in-person learning for the 2020–2021 school year.

### 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 2020, efforts focused on:

- *Earned media*: Efficiency Vermont was mentioned more than 228 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 337,737 users, with over 2.1 million-page views.
- *Newsletter Subscriptions*: Newsletter subscriptions to Efficiency Vermont's residential newsletter (Watts New) increased by 57% year-over-year, with over 25,000 subscriptions.
- *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:

- 17,968 Facebook followers
- 4,622 Twitter followers
- 1,623 Instagram followers
- 849 LinkedIn followers.

#### 5.1.4 BETTER BUILDINGS BY DESIGN CONFERENCE

Efficiency Vermont hosted its 22nd Better Buildings by Design (BBD) conference in South Burlington on February 5 and 6, 2020, 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 2020 conference welcomed 937 total attendees and featured 42 workshops, 61 exhibitors, and 10 professional credit designations. Additionally, due to COVID-19, made a planning decision to transition the 2021 conference (scheduled for February 2021) from an in-person event to a virtual with the theme "Resilient Energy".

#### 5.1.5 CUSTOMER SUPPORT

Efficiency Vermont's Contact Center:

- Continued to provide Vermonters with information about electrical and thermal efficiency, conservation, resources, and referrals.
- Managed 31,137 customer contacts, which included all inbound and outbound calls, emails, and live chats.
- Tracked activity breakout of those contacts by market as follows: 93% residential, 7% commercial.
- Key contact topics:
  - 37% residential weatherization
  - 20% residential HVAC
  - 14% residential efficient products

In addition, due to COVID-19, the Contact Center helped support the Department of Labor's unemployment hotline.

#### 5.1.6 PUBLIC AFFAIRS

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

- Provided repeated testimony in five different legislative committees at the request of lawmakers seeking a general overview of Efficiency Vermont and expertise to inform policy making on energy efficiency.
- At the request of Vermont legislators, provided testimony to several Vermont legislative committees regarding multiple topics, including an overview of Efficiency Vermont, EEU modernization, the K-12 IAQ Grant Program, and weatherization work.
- Worked with the Legislature on S.337, the Energy Efficiency Modernization Act. The Public Affairs Department met individually with 10-plus lawmakers and provided information relating to the bill to many more lawmakers. Efficiency Vermont also

conducted extensive stakeholder engagement on the measure after it had been signed into law.

- Provided testimony regarding an amendment to H.961, which established the K-12 Schools IAQ Grant Program with Efficiency Vermont as program administrator

#### 5.1.7 BUILDING LABELING AND BENCHMARKING

The Residential Working Group continued development, design, and content production of the Vermont Home Energy Profile and online tool. The Commercial Working Group chose the ENERGY STAR Portfolio Manager for the commercial labeling tool and researched labeling impacts in other jurisdictions. In coordination with NEEP, Efficiency Vermont tested and modified the home energy labeling tool, and both the residential and commercial labeling working groups held their final set of meetings and completed recommendations for the final legislative report.

## 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 EMERGING DATA SERVICES

Efficiency Vermont:

- Conducted R&D into evolved load shape and AMI analysis tools to satisfy emerging use cases in Vermont and on the grid.
- Supported collaboration with the U.S. Department of Energy and Environment and the National Renewable Energy Laboratory on end-use profiles for the U.S. building stock project.
- Presented research at ACEEE and Association of Energy Services Professionals conferences on FLM and non-routine adjustment techniques employed in FLM and COVID-19 response research.

#### 5.2.2 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 resource acquisition 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.encyvermont.com/news-blog/whitepapers>, providing the public with access to information about technology demonstration efforts. An overview of 2020 activities follows.

### **Deeper Energy Savings through Advanced Regression Modeling**

Efficiency Vermont:

- Evaluated the explainable artificial intelligence framework on eight Vermont grocery stores, and found that the framework's accuracy and precision were consistently better than Efficiency Vermont's existing approach for modeling grocery store energy

savings.

- Identified the most effective charts in explaining the results of complex building energy regression models to key stakeholders.
- Finalized the 2019 report and drafted the 2020 report presentation.

### **Assessment of Demand Response Capability and Effectiveness**

Efficiency Vermont:

- Added new electric resistance water heaters (ERWHs) and new HPWHs to the demand response program, for a total of 29 ERWHs and 16 HPWHs.
- Launched the electric vehicle supply equipment program offering and enrolled 12 participants in it.
- Called 85 peak events in 2020.
- Finalized the 2019 report and drafted the 2020 report with partner feedback.
- Successfully partnered with WEC and other partners to develop and deliver FLM in residences.

### **Greenhouse Gas Reduction**

Efficiency Vermont:

- Completed three research projects focused on greenhouse gas (GHG) reduction:
  - Quantifying the impact of replacing standard new construction insulation materials with lower-embodied GHG options and piloting replacements on two residences.
  - Assessing the carbon impact of insulating existing homes and confirming opportunities to shift to lower-carbon materials.
  - Evaluating the embodied carbon of CCHPs in commercial applications.
- Drafted the 2020 reports.

### **Healthcare Partnership**

Efficiency Vermont:

- Signed up a total of 30 participants for three Northeast Kingdom, Springfield, and central-west / northwest Vermont area healthcare pilot projects.
- Launched a new pilot with UVM Medical Center Pediatric Pulmonology, referring patients for Healthy Homes home energy visits and IAQ monitor loans.
- Completed assessments / visits and IAQ monitoring for new customers. Completed post-retrofit monitoring on completed homes.
- Facilitated statewide strategy discussions for healthcare reimbursement of energy efficiency . One hospital committed to funding weatherization.
- Finalized the 2019 report. Presented program information at national and regional conferences and provided healthcare provider training on the connections between healthy homes and energy efficiency.

### **Healthy Buildings**

Efficiency Vermont:

- Worked with the Vermont Department of Health to compare school asthma rates with school energy performance for 32 schools in the state.
- Supported the K-12 Schools IAQ Grant Program legislation, program design and

development, and implementation, providing air quality monitors through the grant to 300-plus schools in Vermont.

- Launched the IAQ monitoring program in 11 schools, including installing monitors and collecting occupant surveys.
- Presented at regional and national conferences on the connections between healthy buildings and energy efficiency.

### **Phase Change Materials (PCM) in Refrigeration**

Efficiency Vermont:

- Researched and tested PCM applications and the PCM supply chain for the Vermont market.
- Drafted the 2020 report.

### **Energy Resiliency Return on Investment**

Efficiency Vermont:

- Established a definition of *resiliency* within the context of Efficiency Vermont. Developed a methodology for calculating the return on investment associated with energy-related resiliency infrastructure.
- Identified pilot projects for testing the calculator in 2021.
- Completed the 2020 report.

## **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 agreements with state agencies, to maintain accountability and to provide accurate tracking of progress for service delivery optimization, for public benefit, and for the benefit of entities outside Vermont seeking replication.

Efficiency Vermont filed required documents, including:

- Monthly invoices and reports
- Quarterly reports for March, June, and September
- 2019 Budget Variance
- 2019 Savings Claim Summary
- 2019 Annual Report
- 2019 Administrative Cost Report
- 2019 Designated Downtown report
- 2020 update to the 2018–2020 Triennial Plan
- 2021–2023 Triennial Plan

### **5.3.2 DEMAND RESOURCES PLAN**

The Commission approved Efficiency Vermont’s revised 2021-2023 DRP proposal, which Efficiency Vermont filed in light of COVID-19 and the resulting economic recession. The approved 2021-2023 DRP will achieve a similar level of energy savings, while minimizing

upward pressure on EEC rates in 2021. The Commission also approved Efficiency Vermont’s 2024-2026 DRP proposal. Beginning in 2021, Efficiency Vermont will implement two new programs: Flexible Load Management (“FLM”); and Refrigerant Management. To measure performance of these new programs, the Commission also approved two new QPIs: flexible kW installed; and greenhouse gas (“GHG”) reductions, including electric energy plus non-energy GHG reductions (as measured by Metric Tons CO<sub>2</sub>e).

### 5.3.3 PARTICIPATION IN STATE AND REGIONAL INTEGRATED PLANNING

In addition to quarterly meetings, Efficiency Vermont participated in the following meetings:

- Vermont System Planning Committee (VSPC) forecasting subcommittee meetings focused on the development of Vermont Electric Company’s (VELCO’s) long-range transmission forecast. Efficiency Vermont worked with VELCO to forecast the long-term load impacts of CCHPs for inclusion in the forecast.
- VSPC generation constraint ad hoc subcommittee meeting focused on the effect of solar generation on transformers at the Vergennes substation.
- Independent System Operator–New England (ISO-NE) consumer liaison group quarterly meeting focused on regional load impacts of the pandemic and states’ public utility commission responses.
- Two remote meetings: a generation constraint subcommittee meeting and a geotargeting subcommittee meeting.

### 5.3.4 INDEPENDENT SYSTEM OPERATOR–NEW ENGLAND FORWARD CAPACITY MARKET (FCM) ADMINISTRATION

Efficiency Vermont:

- Qualified 9.8 megawatts (MW) of additional summer capacity and 50 MW of additional winter capacity. If the new capacity clears the auction along with existing capacity, it will result in an obligation of 102 MW starting in June 2024.
- Bid capacity exceeding the obligation into monthly reconfiguration auctions, resulting in over \$55,000 of additional revenue.
- Evaluated the potential impacts of Act No. 151 on Efficiency Vermont’s programs and capacity market obligations and revenue.

### 5.3.5 EXTERNAL NON-REGULATORY REPORTING

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

- Distribution utility Tier III MOUs and benefits reports.
- Periodic and ad hoc reports summarizing Efficiency Vermont performance for: the distribution utilities, Regional Planning Commissions, 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 (EIA).
- EAN’s 2020 Vermont Energy Dashboard.
- Executed and implemented EEU shared-services agreements with BED and VGS.

## 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.

### 5.4.1 2019 ANNUAL SAVINGS VERIFICATION

Support provided by Efficiency Vermont for the annual savings verification process included coordination of savings verification with the Department's third-party evaluation contractor, Cadmus. Coordination activities included transferring the 2019 program tracking database, providing sampled project data, and reviewing evaluation findings and recommendations. Realization rates for program year 2019 were 98.7% for MWh, 100.8% for Winter kW, 101.5% for summer kW, and 98.0% for MMBtu. The realization rate findings were applied to Efficiency Vermont's tracking database.

### 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, and coordinated other EEU evaluation efforts. 2020 highlights included:

- Coordination of residential and commercial market assessments.
- Project verification process changes due to COVID-19.
- Review of new Vermont code adoption and its impact on program savings assumptions.

### 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 six new measure characterizations and completed updates for 13 existing characterizations for programs and technologies in 2020 that will impact 2021 programs. Highlights included new measures for commercial kitchen equipment and refrigerant leak repair, as well as updates to multifamily common area laundry equipment.

### 5.4.4 ISO-NE FCM METERING, MONITORING, AND EVALUATION

This process entailed the identification and metering of completed projects, followed by the acquisition of data to confirm projected savings. In 2020, Efficiency Vermont assessed data for 2019 projects spread over 21 sites, received evaluation reports for program year (PY) 2018 projects, and achieved realization rates of 90.2% for the winter and 87.5% for the summer for the PY 2018 project sample. Due to COVID-19, there were no submetering deployments for FCM PY 2019, but evaluators determined in the fourth quarter that evaluation could be performed on sites that had AMI data. This late start meant that PY 2019

activity would spill over into 2021 calendar year. Efficiency Vermont filed a verification report to ISO-NE as part of its FCM bid obligations.

#### 5.4.5 QUALITY MANAGEMENT

##### **Service Quality and Reliability Plan (SQRP)**

In 2020, Efficiency Vermont handled 31,200 customer contacts, compared to 32,500 in 2019, a decrease of 4%.

The following are totals for 2020:

- Total Contact Center metrics for 2020
  - 8 seconds average speed to answer
  - 94% of calls handled by a live agent during normal business hours
  - 2% call abandonment rate
- Complaints
  - Received 1 complaint
  - 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%)<sup>21</sup>
  - Residential = 83%
  - Commercial = 87%
- 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 = 97%
  - Residential new construction = NA<sup>22</sup>
  - Home Performance with ENERGY STAR = 97%
  - Custom C&I = 100%

## 5.5 ADMINISTRATION AND REGULATORY AFFAIRS

### 5.5.1 GENERAL ADMINISTRATION

Efficiency Vermont:

- Engaged in coordination of service implementation across different functions: budget management; participation in regular check-ins with the other two EEU's; and managing, monitoring, and conducting internal communication on overall performance and spending.
- Undertook activities centering on key organizational functions, including preparing and administering team and staff meetings.

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<sup>21</sup> These percentages represent customers who responded to survey questions.

<sup>22</sup> Efficiency Vermont sent surveys to sixteen residential new construction participants, which was lower than normal due to delays sending the survey. Efficiency Vermont did not receive any survey responses.

### 5.5.2 REGULATORY AFFAIRS (NON-DRP)

#### Efficiency Vermont:

- Supported Efficiency Vermont’s legislative outreach concerning the passage of Act No. 151, the Energy Efficiency Modernization Act, which grants the Commission temporary authority to approve up to \$2 million of EEC funds for use in upstream electric vehicle and home electrification/weatherization programs done in coordination with distribution utilities.
- In Case No. 19-2956-INV regarding Act 62 regarding the creation of an all-fuels efficiency program, expansion of EEU programs and services, and funding options for those programs:
  - Filed analysis of the incremental level of weatherization and thermal services needed to achieve Vermont-specific energy goals; funding for carbon reduction measures, strategies, and policies; and the establishment of an all-fuels efficiency program.
  - Recommended focusing remaining milestones in this investigation on the topics of improving the funding structure for programs that support building shell and thermal efficiency.
- Signed an agreement with the Agency of Education to administer the K–12 Schools IAQ Grant.
- In Case No. 20-2022-INV regarding 2021 EEC rates, Efficiency Vermont recommended an alternative methodology for calculating its 2021 EEC rates, which the Commission approved. The 2021 EEC rates consist of flat-rates for all customer classes both residential and business.
- In PUC Case No. 18-2867 regarding EEU regulation:
  - In coordination with the other EEU’s and Department, filed joint comments regarding EEU fiscal agent funds disbursement and reconciliation. With approval from the Commission, VEIC began to manage those funds as the Efficiency Vermont fiscal agent.
  - Filed consensus findings from stakeholder discussions and proposed changes to the *Process and Administration of an Energy Efficiency Utility Order of Appointment (P&A) document* regarding the process, procedures, and scope of TAG, amending the deadline for EEU quarterly reports, and clarifying shared EEU cost procedures.
- In Case No. 19-0397-INV regarding EEU avoided costs:
  - Recommended the screening criteria for EEU efficiency programs remain distinct from those of DU Tier III programs, and that the Commission’s July 6<sup>th</sup> Order establishing avoided costs should not be altered or amended.
  - Pursuant to the Commission’s request, facilitated stakeholder discussions on the Non-Energy Benefit (NEB) and low-income adders, which are each 15% adders in the current cost-effectiveness screening tool. Discussions focused on whether health and /or economic development benefits of efficiency (primarily home weatherization) are appropriately characterized in the NEB adder. Efficiency Vermont filed a status report on these discussions.
- Presented a request that VEIC, the entity that administers Efficiency Vermont, be allowed temporarily to use Efficiency Vermont TEPF funds for the ISO-NE Financial

Assurance obligation, which was approved by the Commission. Identified and implemented a financial process improvement wherein TEPF funds would be utilized for the remainder of 2020 to meet the ISO-NE financial assurance obligation.

- In Case No. 19-0302-INV regarding the Energy Savings Account pilot, filed the *Annual Progress Report for Energy Savings Account Pilot Program*.
- Met with the Department's director of energy efficiency resources to coordinate productive regulatory work processes between Efficiency Vermont and the Department, and to discuss the role of Efficiency Vermont in electrification.
- Participated in a series of meetings with the Department to discuss Efficiency Vermont's role in the State's response to COVID-19 and provided the Department with references to inform guidelines for safely preparing contractors and evaluators to return to work during COVID-19.
- Submitted comments supporting the Department's Draft Emergency Broadband Action Plan.
- Participated in five workshops conducted by the Department to investigate various rate design strategies to encourage more efficient utilization of the electric grid.
- Filed comments on ISO-NE's 2020 draft energy efficiency forecast.

### 5.5.3 FINANCIAL AND LEVERAGED PRODUCT DEVELOPMENT

There was no activity in 2020 owing to the focus on implementation of existing financial services. See Section 4.4, Financial Services.

## 5.6 INFORMATION TECHNOLOGY

### 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. Major updates and development project highlights included finance integrations with the tracker project management application to increase the efficiency of operations and data quality related to project payees and rebate processing; the navigator application to support the DRP Proceeding, updates to GHG emissions and FLM tracking to support new Quantitative Performance Indicators for the 2021–2023 performance period; and the ORC to support processing of Home Performance with ENERGY STAR projects. Over 150 software releases were implemented in 2020.

### 5.6.2 UTILITY DATA MANAGEMENT

Efficiency Vermont:

- Continued communication and business intelligence support activities to acquire data securely from Vermont's 16 electric distribution utilities and import it to the tracker utility database.
- Completed development, testing, and deployment of new GMP and Stowe Electric Department billing data staging and integration packages to conform to the new billing data standard and protocols established by Docket 8316.
- Continued communication and support activities with the following Vermont municipal utilities and their vendors to acquire new billing data transfer files

conforming to the Docket 8316 agreement: Barton Village Electric Department, Village of Jackson Electric Department, Village of Johnson Electric Department, Ludlow Electric Department, and Hardwick Electric Department.

- Completed VGS residential billing data acquisition and monthly transfer. Deployed VGS residential customer billing dashboard report.
- Made direct payments to distribution utilities for data acquisition and standardization of billing and AMI interval data transfer and import . The billing standardization infrastructure and changes to enable AMI, increased Efficiency Vermont labor costs for this initiative.

### 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 2020, so did the need to provide scaled data systems, architecture, and reporting to support this growth. Efficiency Vermont:

- Enhanced Tracker integrated reports with CRM (customer relationship management) tracking and features.
- Developed new reports, generated contact lists, and provided overall data support to enable COVID-19 State of Emergency–related customer engagement tracking and outcomes. Provided custom report and dashboard development to meet Efficiency Vermont’s changing program and data needs.
- Provided business intelligence and database support for the Home Performance with ENERGY STAR program shift to a prescriptive model that leveraged the online rebates platform, the HERO application retirement project, and the mobile application retirement project.
- Designed, developed, and deployed the new incentives and savings operational dashboard report and deployed new self-service BI tools to support the shift to new forecasting business processes.

## 6.1 Resource Acquisition Summary

	Total Efficiency Vermont Resource Acquisition	Thermal Energy and Process Fuels Resource Acquisition <sup>2</sup>	Electric Resource Acquisition	Customer Credit Resource Acquisition
<b>Efficiency Vermont Costs</b>				
Year to Date Costs	\$49,980,881	\$8,614,630	\$41,366,251	\$0
Annual Budget Estimate <sup>1</sup>	\$49,984,444	\$8,614,750	\$41,369,694	\$0
Unspent Annual Budget Estimate	\$3,563	\$120	\$3,442	(\$0)
% Annual Budget Estimate Unspent	0.0%	0.0%	0.0%	0.0%
<b>Other Costs and Commitments</b>				
Participant Costs Year to Date	\$32,988,155	\$11,389,954	\$21,598,202	\$0
Third Party Costs Year to Date	\$300,353	\$168,726	\$131,627	\$0
<b>Savings Results</b>				
MWh Year to Date	99,190	-417	99,607	0
MWh Cumulative starting 1/1/18	347,759	-8,005	355,764	0
<b>Winter Peak Coincident kW Savings Results</b>				
Winter Coincident Peak kW Year to Date	15,304	-132	15,436	0
Winter Coincident Peak kW Cumulative Starting 1/1/18	57,467	-1,645	59,112	0
<b>Summer Peak Coincident kW Savings Results</b>				
Summer Coincident Peak kW Year to Date	11,552	23	11,529	0
Summer Coincident Peak kW Cumulative Starting 1/1/18	42,556	-334	42,890	0
<b>TRB Savings Results</b>				
TRB Year to Date	\$102,572,566	\$20,212,695	\$82,359,871	\$0
TRB Cumulative Starting 1/1/18	\$380,517,307	\$87,045,142	\$293,472,165	\$0
<b>MMBtu Savings Results</b>				
MMBtu Year to Date	90,233	92,049	-1,816	0
MMBtu Cumulative Starting 1/1/18	414,615	397,947	16,668	0
<b>MWh Lifetime Savings Results</b>				
MWh Lifetime Year to Date	1,069,539	-7,835	1,077,374	0
MWh Lifetime Cumulative Starting 1/1/18	3,507,368	-123,222	3,630,591	0
<b>Participation</b>				
Partic.w/ installs Year to Date	57,201	4,291	52,910	0
Partic.w/ installs Cumulative starting 1/1/18	235,746	14,123	221,622	1

<sup>1</sup> Annual budgets are estimates only and provided for informational purposes.

<sup>2</sup> Annual incremental net MMBtu savings include savings funded by Thermal Energy and Process Fuels and the State Weatherization Grant

## 6.2 Budget Summary

	<u>Budget</u> <u>Current Year</u> <u>2020<sup>1</sup></u>	<u>Actual</u> <u>Current Year</u> <u>2020</u>	%	<u>Budget</u> <u>2018-2020</u>	<u>Actual</u> <u>2018-2020</u>	%
<b>RESOURCE ACQUISITION</b>						
<b><i>Electric Efficiency Funds Activities</i></b>						
Business Sector	\$ 21,703,777	\$ 20,833,828	96%	\$ 72,944,357	\$ 65,684,067	90%
Customer Credit	\$ -	\$ -	0%	\$ 243,261	\$ 4,544	2%
Energy Savings Account Pilot	\$ 2,550,000	\$ 67,673	0%	\$ 2,550,000	\$ 67,673	3%
<b>Residential Sector</b>	<b>\$ 19,114,865</b>	<b>\$ 19,981,418</b>	<b>105%</b>	<b>\$ 55,676,559</b>	<b>\$ 61,034,971</b>	<b>110%</b>
<b>Total Electric Efficiency Funds Activities</b>	<b>\$ 43,368,642</b>	<b>\$ 40,882,919</b>	<b>94%</b>	<b>\$ 131,414,177</b>	<b>\$ 126,791,255</b>	<b>96%</b>
<b><i>Thermal Energy and Process Fuels Funds Activities</i></b>						
Business Sector	\$ 1,279,334	\$ 1,071,446	84%	\$ 6,624,999	\$ 4,598,885	69%
Residential Sector	\$ 7,220,666	\$ 7,428,436	103%	\$ 19,875,001	\$ 21,752,164	109%
<b>Total Thermal Energy and Process Fuels Funds Activities</b>	<b>\$ 8,500,000</b>	<b>\$ 8,499,881</b>	<b>100%</b>	<b>\$ 26,500,000</b>	<b>\$ 26,351,049</b>	<b>99%</b>
<b>TOTAL RESOURCE ACQUISITION</b>	<b>\$ 51,868,642</b>	<b>\$ 49,382,800</b>	<b>95%</b>	<b>\$ 157,914,177</b>	<b>\$ 153,142,304</b>	<b>97%</b>
<b>DEVELOPMENT &amp; SUPPORT SERVICES</b>						
Education and Training	\$ 663,058	\$ 713,018	108%	\$ 2,811,600	\$ 2,073,848	74%
Applied Research and Development	\$ 360,856	\$ 346,489	96%	\$ 1,189,600	\$ 1,081,746	91%
Planning and Reporting	\$ 651,475	\$ 506,131	78%	\$ 1,701,100	\$ 1,539,481	90%
Evaluation, Measurement, and Verification	\$ 474,401	\$ 402,924	85%	\$ 2,185,100	\$ 1,321,789	60%
Administration and Regulatory Affairs	\$ 473,600	\$ 489,121	103%	\$ 1,635,700	\$ 1,395,441	85%
Information Technology	\$ 1,335,000	\$ 1,500,419	112%	\$ 4,290,000	\$ 4,250,573	99%
<b>TOTAL DEVELOPMENT &amp; SUPPORT SERVICES</b>	<b>\$ 3,958,390</b>	<b>\$ 3,958,102</b>	<b>100%</b>	<b>\$ 13,813,100</b>	<b>\$ 11,662,878</b>	<b>84%</b>
Act 62 Weatherization	\$ 2,160,832	\$ 2,158,744	100%	\$ 2,250,000	\$ 2,247,912	100%
State Weatherization Grant	\$ 87,338	\$ 87,338	100%	\$ 350,000	\$ 350,000	100%
Operations Fee (1.35%)	\$ 719,240	\$ 719,189	100%	\$ 2,280,609	\$ 2,223,997	98%
<b>Sub-Total Prior to Performance-Based Compensation</b>	<b>\$ 58,794,442</b>	<b>\$ 56,306,173</b>	<b>96%</b>	<b>\$ 176,607,886</b>	<b>\$ 169,627,091</b>	<b>96%</b>
Performance-Based Compensation (3.15%)	\$ 1,678,227	\$ -	0%	\$ 5,321,422	\$ 4,825,665	91%
<b>Total Efficiency Vermont</b>	<b>\$ 60,472,668</b>	<b>\$ 56,306,173</b>	<b>93%</b>	<b>\$ 181,929,307</b>	<b>\$ 174,452,756</b>	<b>96%</b>

<sup>1</sup> 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. 2020 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 worth of lifetime electric, fossil, and water benefits	\$294,906,700	\$293,472,165	100%
2	Annual Electricity Savings	Annual incremental net MWh savings	343,600	355,764	104%
3	Statewide Summer Peak Demand Savings	Cumulative net summer peak demand (kW) savings	43,200	42,890	99%
4	Statewide Winter Peak Demand Savings	Cumulative net winter peak demand (kW) savings	58,900	59,112	100%
5	Lifetime Electricity Savings	Lifetime incremental net MWh savings	3,512,200	3,630,591	103%

MPR#	Title	Minimum Requirement	Minimum	Status	%
6	Minimum Electric Benefits	Total electric benefits divided by total costs	1.2	1.9	162%
7	Threshold (or minimum acceptable) Level of Participation by Residential Customers	Total residential sector spending	\$41,184,000	\$61,858,943	150%
8	Threshold (or minimum acceptable) Level of Participation by Low-Income Households	Total low-income single and multifamily services spending	\$10,892,000	\$13,471,775	124%
9	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	4,589	229%
10	Geographic Equity	TRB for each geographic area is greater than values shown on Geo-Equity Table	12	12	100%
11	Administrative Efficiency	To clearly define and track all administrative costs, including incentive and non-incentive costs, associated with Efficiency Vermont's delivery of services under the Order of Appointment	1	1	100%
12	Service Quality	Achieve 92 or more metric points	92	99	108%
13	Resource Acquisition-Performance Period Spending	Total spending for a three-year performance period (including applicable operations fees) is less than threshold	\$134,128,456	\$128,497,418	96%
14	Development and Support Services-Performance Period Spending	Total spending for a three-year performance period (including applicable operations fees) is less than threshold	\$14,138,248	\$11,820,327	84%

## 6.4 Electric Minimum TRB per Geographic Area (QPI #10)

Geographic Area <sup>1</sup>	Required TRB per Geographic Area <sup>2</sup>	Period To Date TRB per Geographic Area	% of Goal
Addison	\$8,449,527	\$21,815,255	258%
Bennington	\$9,887,504	\$19,549,660	198%
Caledonia	\$6,768,863	\$10,407,768	154%
Chittenden	\$49,009,127	\$68,169,183	139%
Essex/Orleans	\$7,111,633	\$14,356,742	202%
Franklin	\$13,888,276	\$29,201,304	210%
Grand Isle/Lamoille	\$7,758,080	\$15,749,531	203%
Orange	\$5,043,007	\$10,032,980	199%
Rutland	\$16,797,004	\$36,433,320	217%
Washington	\$13,359,417	\$29,448,244	220%
Windham	\$14,974,353	\$17,185,982	115%
Windsor	\$13,941,791	\$21,122,197	152%
<b>Total</b>	<b>\$166,988,583</b>	<b>\$293,472,165</b>	<b>176%</b>

<sup>1</sup> All geographic names above refer to Vermont Counties.

<sup>2</sup> Required Total Resource Benefits (TRB) targets have been adjusted for Customer Credit

**6.5 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 <sup>1</sup>	388,700	397,947	102%
2	Residential Single Family Comprehensiveness	Combined performance for metrics 2.a.-2.d. <sup>2</sup>	100%	110%	110%
		a. Average air leakage reduction per comprehensive project	34%	31%	91%
		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%	56%	120%
		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%	34%	120%
		d. Number of comprehensive projects completed.	2,286	2,518	110%

MPR#	Title	Minimum Requirement	Minimum	Status	%
3	Threshold (or minimum acceptable) Level of Participation by Residential Customers	Residential sector spending as % of total spending	62.5%	82.5%	132%
4	Threshold (or minimum acceptable) Level of Participation by Low-Income Households	Low-income single- and multi-family spending as % of total spending	17.0%	28.1%	165%
5	Performance Period Spending	Total spending for a three-year performance period (including applicable operations fees) is less than threshold	\$27,116,193	\$26,706,788	98%

<sup>1</sup> Annual incremental net MMBtu savings include savings funded by Thermal Energy and Process Fuels, Act 62 Weatherization, and the State Weatherization Grant

<sup>2</sup> Performance for QPI #2 is based on a weighted average of performance for each of the components within the QPI. Components 2a, 2b, and 2c each contribute 30% toward the weighted average, and component 2d contributes 10% toward the weighted average, representing a total of 100%. Performance of individual components in the weighted average are each capped at a value of 120% compared to their 100% targets.

### 6.6 Service Quality and Reliability Summary Report

Metric #	Metric Description	Reporting Frequency	Performance this Period	Points Earned this Period	Cumulative 2018-20 Points Earned	Total Possible 2018-20 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	83.0%	12	12	12	100%
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	87.0%	12	12	12	100%
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	97.5%	4	12	12	100%
4	Average answer time shall be ≤ 15 seconds per call	quarterly	8.0	1	10	12	83%
5	Average percentage of calls answered shall be ≥ 85%	quarterly	97.0%	1	9	12	75%
6	Average percentage of abandoned calls shall be ≤ 3%	quarterly	1.0%	1	8	12	67%
7	Percentage of complaint follow-up call attempted by end of next business day shall be ≥ 95%	quarterly	100.0%	1	12	12	100%
8	Percentage of complaints closed within 12 business days of initial complaint call shall be ≥ 95%	quarterly	100.0%	1	12	12	100%
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	0.002%	4	12	12	100%
<b>Totals</b>				<b>37</b>	<b>99</b>	<b>108</b>	<b>92%</b>

## 6.7 Electric Resource Acquisition Summary

Services	Totals				Business Energy Services			Residential Energy Services			Other
	All Resource Acquisition (including CC)	Efficiency Vermont Resource Acquisition	Subtotal Business Energy Services	Subtotal Residential Energy Services	Business New Construction	Business Existing Facilities	Energy Savings Account Pilot	Residential New Construction	Efficient Products	Existing Homes	Customer Credit Program
<b>Electric Resource Acquisition Costs</b>											
Year to Date Costs	\$41,433,925	\$41,433,925	\$21,182,758	\$20,251,167	\$1,859,179	\$19,255,905	\$67,673	\$3,141,699	\$12,212,300	\$4,897,167	\$0
Annual Budget Estimate <sup>1</sup>	\$43,919,693	\$43,919,693	\$24,546,777	\$19,372,916	\$1,358,602	\$20,638,175	\$2,550,000	\$4,039,284	\$10,109,712	\$5,223,920	\$0
Unspent Annual Budget Estimate	\$2,485,768	\$2,485,768	\$3,364,019	(\$878,251)	(\$500,577)	\$1,382,270	\$2,482,327	\$897,585	(\$2,102,588)	\$326,753	(\$0)
% Annual Budget Estimate Unspent	6%	6%	14%	-5%	-37%	7%	97%	22%	-21%	6%	0%
<b>Savings Results</b>											
MWh Year to Date	99,607	99,607	65,264	34,343	4,230	61,034	0	1,017	31,442	1,884	0
MWh Cumulative starting 1/1/18	355,764	355,764	220,557	135,207	18,351	202,206	0	5,208	122,544	7,455	0
3-Year MWh Goal	nap	343,600	199,900	143,700	21,000	178,900	N/A	4,400	119,200	20,100	N/A
% of 3-Year MWh Goal	nap	104%	110%	94%	87%	113%	N/A	118%	103%	37%	nap
Winter Coincident Peak kW Year to Date	15,436	15,436	7,608	7,827	534	7,075	0	178	7,254	395	0
Winter Coincident Peak kW Cumulative starting 1/1/18	59,112	59,112	26,411	32,701	2,303	24,108	0	1,034	30,086	1,582	0
3-Year Winter Coincident Peak kW Goal	nap	58,900	26,700	32,200	3,300	23,400	N/A	700	28,400	3,100	N/A
% of 3-Year Winter Coincident Peak kW Goal	nap	100%	99%	102%	70%	103%	N/A	148%	106%	51%	nap
Summer Coincident Peak kW Year to Date	11,529	11,529	9,022	2,507	587	8,436	0	74	2,307	126	0
Summer Coincident Peak kW Cumulative starting 1/1/18	42,890	42,890	31,569	11,321	2,720	28,849	0	466	10,264	591	0
3-Year Summer Coincident Peak kW Goal	nap	43,200	29,900	13,300	3,400	26,500	N/A	100	11,100	2,100	N/A
% of 3-Year Summer Coincident Peak kW Goal	nap	99%	106%	85%	80%	109%	N/A	466%	92%	28%	nap
TRB Year to Date	\$82,359,871	\$82,359,871	\$3,971,132	\$28,388,739	\$5,339,697	\$48,631,435	0	\$2,750,129	\$24,138,080	\$1,500,530	\$0
TRB Cumulative starting 1/1/18	\$293,472,165	\$293,472,165	\$186,225,046	\$107,247,119	\$24,404,914	\$161,820,132	0	\$15,793,711	\$83,856,128	\$7,597,279	\$0
3-Year TRB Goal	nap	\$294,906,700	\$215,088,100	\$79,818,600	\$33,822,500	\$181,265,600	N/A	\$8,447,400	\$61,074,400	\$10,296,800	N/A
% of 3-Year TRB Goal	nap	100%	87%	134%	72%	89%	N/A	187%	137%	74%	nap
<b>Associated Benefits</b>											
MMBtu Year to Date	(1,816)	(1,816)	(3,536)	1,720	1,476	(5,012)	0	6,548	(5,071)	242	0
MMBtu Cumulative starting 1/1/18	16,668	16,668	(13,606)	30,274	15,240	(28,846)	0	31,850	(7,098)	5,522	0
<b>MWh Lifetime Savings Results</b>											
MWh Lifetime to Date	1,077,374	1,077,374	699,480	377,894	64,545	634,935	0	16,118	341,559	20,216	0
MWh Lifetime starting 1/1/18	3,630,591	3,630,591	2,342,107	1,288,483	266,201	2,075,907	0	94,975	1,120,886	72,623	0
3-Year MWh Lifetime Goal	N/A	3,512,200	2,502,900	1,009,300	318,200	2,184,700	N/A	55,000	837,800	116,500	N/A
% of 3-Year MWh Lifetime Goal	N/A	103%	94%	128%	84%	95%	N/A	173%	134%	62%	N/A
<b>Participation</b>											
Partic.w/ installs Year to Date	52,910	52,910	8,446	44,464	47	8,399	0	586	40,567	3,311	0
Partic.w/ installs Cumulative starting 1/1/18	221,623	221,622	25,433	196,189	206	25,227	0	2,006	184,668	9,515	1

<sup>1</sup> Annual budgets are provided for information purposes only. Efficiency Vermont operates under three-year Commission approved budgets.

## 6.8 Electric Resource Acquisition including Customer Credit

	<u>Prior Year</u> 2019	<u>Current Year</u> 2020	<u>Cumulative</u> starting 1/1/18	<u>Cumulative</u> starting 1/1/12
<b># participants with installations</b>	77,057	52,910	221,623	629,441
<b>Operating Costs</b>				
Administration	\$2,880,846	\$2,598,591	\$8,730,280	\$26,591,097
Programs and Implementation	\$5,153,429	\$4,810,129	\$14,197,058	\$43,407,457
Strategy and Planning	<u>\$1,041,305</u>	<u>\$809,393</u>	<u>\$2,900,099</u>	<u>\$11,380,657</u>
<b>Subtotal Operating Costs</b>	<b><u>\$9,075,580</u></b>	<b><u>\$8,218,113</u></b>	<b><u>\$25,827,437</u></b>	<b><u>\$81,379,211</u></b>
<b>Technical Assistance Costs</b>				
Services to Participants	\$6,898,710	\$6,239,272	\$19,608,282	\$50,794,879
Services to Trade Allies	<u>\$1,132,897</u>	<u>\$1,111,040</u>	<u>\$3,391,648</u>	<u>\$9,623,162</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$8,031,606</u></b>	<b><u>\$7,350,312</u></b>	<b><u>\$22,999,930</u></b>	<b><u>\$60,418,041</u></b>
<b>Support Services</b>				
Consulting	\$310,949	\$93,064	\$701,257	\$2,414,548
Customer Support	\$117,166	\$97,100	\$318,366	\$1,756,833
Data and Technical Services	\$695,450	\$604,937	\$1,975,085	\$3,531,695
Information Technology	\$0	\$0	\$0	\$124,663
Marketing	\$2,851,262	\$2,385,074	\$7,600,634	\$18,599,672
Policy & Public Affairs	\$2,614	\$0	\$18,503	\$301,698
Other	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$108,624</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$3,977,441</u></b>	<b><u>\$3,180,174</u></b>	<b><u>\$10,613,845</u></b>	<b><u>\$26,837,734</u></b>
<b>Incentive Costs</b>				
Incentives to Participants	\$21,572,569	\$21,758,406	\$67,382,537	\$197,817,766
Incentives to Trade Allies	<u>\$842,544</u>	<u>\$926,918</u>	<u>\$1,916,992</u>	<u>\$2,185,493</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$22,415,112</u></b>	<b><u>\$22,685,324</u></b>	<b><u>\$69,299,528</u></b>	<b><u>\$200,003,259</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$43,499,740</u></b>	<b><u>\$41,433,925</u></b>	<b><u>\$128,740,741</u></b>	<b><u>\$368,638,245</u></b>
<b>Total Participant Costs</b>	<b>\$27,452,277</b>	<b>\$21,598,202</b>	<b>\$73,579,171</b>	<b>\$196,711,725</b>
<b>Total Third Party Costs</b>	<b><u>\$62,239</u></b>	<b><u>\$131,627</u></b>	<b><u>\$285,001</u></b>	<b><u>\$3,292,793</u></b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$71,014,256</u></b>	<b><u>\$63,163,754</u></b>	<b><u>\$202,604,913</u></b>	<b><u>\$568,642,763</u></b>
<b>Annualized MWh Savings</b>				
Annualized MWh Savings	116,156	99,607	355,764	1,063,615
Lifetime MWh Savings	1,216,474	1,077,374	3,630,591	11,282,982
TRB Savings (2018 \$)	\$102,111,785	\$82,359,871	\$293,472,165	\$954,963,835
Winter Coincident Peak kW Savings	19,695	15,436	59,112	184,778
Summer Coincident Peak kW Savings	13,354	11,529	42,890	125,288
Annualized MWh Savings/Participant	1.507	1.883	1.605	1.690
Weighted Lifetime	10.5	10.8	10.2	10.6
<b>Annualized MWh Savings (adjusted for measure life)</b>				
Annualized MWh Savings (adjusted for measure life)				947,333
<b>Winter Coincident Peak kW Savings (adjusted for measure life)</b>				
Winter Coincident Peak kW Savings (adjusted for measure life)				156,712
<b>Summer Coincident Peak kW Savings (adjusted for measure life)</b>				
Summer Coincident Peak kW Savings (adjusted for measure life)				109,407

## 6.9 Electric Resource Acquisition excluding Customer Credit

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>	<u>Cumulative</u> <u>starting 1/1/12</u>
<b># participants with installations</b>	77,057	52,910	221,622	629,438
<b><u>Operating Costs</u></b>				
Administration	\$2,880,846	\$2,598,591	\$8,729,342	\$26,108,542
Programs and Implementation	\$5,153,429	\$4,810,129	\$14,197,058	\$43,325,522
<u>Strategy and Planning</u>	<u>\$1,041,305</u>	<u>\$809,393</u>	<u>\$2,900,099</u>	<u>\$11,371,026</u>
<b>Subtotal Operating Costs</b>	<b><u>\$9,075,580</u></b>	<b><u>\$8,218,113</u></b>	<b><u>\$25,826,499</u></b>	<b><u>\$80,805,090</u></b>
<b><u>Technical Assistance Costs</u></b>				
Services to Participants	\$6,898,710	\$6,239,272	\$19,604,743	\$50,671,082
<u>Services to Trade Allies</u>	<u>\$1,132,897</u>	<u>\$1,111,040</u>	<u>\$3,391,648</u>	<u>\$9,600,137</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$8,031,606</u></b>	<b><u>\$7,350,312</u></b>	<b><u>\$22,996,391</u></b>	<b><u>\$60,271,219</u></b>
<b><u>Support Services</u></b>				
Consulting	\$310,949	\$93,064	\$701,257	\$2,407,411
Customer Support	\$117,166	\$97,100	\$318,366	\$1,749,688
Data and Technical Services	\$695,450	\$604,937	\$1,974,958	\$3,524,665
Information Technology	\$0	\$0	\$0	\$124,017
Marketing	\$2,851,262	\$2,385,074	\$7,600,634	\$18,561,293
Policy & Public Affairs	\$2,614	\$0	\$18,503	\$293,640
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$106,873</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$3,977,441</u></b>	<b><u>\$3,180,174</u></b>	<b><u>\$10,613,718</u></b>	<b><u>\$26,767,588</u></b>
<b><u>Incentive Costs</u></b>				
Incentives to Participants	\$21,572,569	\$21,758,406	\$67,143,820	\$191,566,644
<u>Incentives to Trade Allies</u>	<u>\$842,544</u>	<u>\$926,918</u>	<u>\$1,916,992</u>	<u>\$2,185,481</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$22,415,112</u></b>	<b><u>\$22,685,324</u></b>	<b><u>\$69,060,811</u></b>	<b><u>\$193,752,125</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$43,499,739</u></b>	<b><u>\$41,433,925</u></b>	<b><u>\$128,497,419</u></b>	<b><u>\$361,596,021</u></b>
<b>Total Participant Costs</b>	<b>\$27,452,277</b>	<b>\$21,598,202</b>	<b>\$73,817,888</b>	<b>\$197,018,393</b>
<b>Total Third Party Costs</b>	<b><u>\$62,239</u></b>	<b><u>\$131,627</u></b>	<b><u>\$285,001</u></b>	<b><u>\$3,292,793</u></b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$71,014,256</u></b>	<b><u>\$63,163,753</u></b>	<b><u>\$202,600,308</u></b>	<b><u>\$561,907,207</u></b>
<b><u>Annualized MWh Savings</u></b>				
Annualized MWh Savings	116,156	99,607	355,764	1,033,044
Lifetime MWh Savings	1,216,474	1,077,374	3,630,591	11,075,204
TRB Savings (2018 \$)	\$102,111,785	\$82,359,871	\$293,472,165	\$942,346,672
Winter Coincident Peak kW Savings	19,695	15,436	59,112	183,654
Summer Coincident Peak kW Savings	13,354	11,529	42,890	124,166
Annualized MWh Savings/Participant	1.507	1.883	1.605	1.641
Weighted Lifetime	10.5	10.8	10.2	10.7
<b><u>Annualized MWh Savings (adjusted for measure life)</u></b>				
Annualized MWh Savings (adjusted for measure life)				916,762
<b><u>Winter Coincident Peak kW Savings (adjusted for measure life)</u></b>				
Winter Coincident Peak kW Savings (adjusted for measure life)				155,588
<b><u>Summer Coincident Peak kW Savings (adjusted for measure life)</u></b>				
Summer Coincident Peak kW Savings (adjusted for measure life)				108,285

## 6.10 Electric Resource Acquisition - End Use Breakdown

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	1,857	1,788	1,724	22,990	73	327	114	\$1,826,023	\$403,436	\$556,874
Behavior Change	7	2,445	2,154	3,047	285	207	125	\$190,179	\$92,816	-\$20,271
Cooking and Laundry	1,499	1,552	1,786	18,580	210	161	1,444	\$2,797,409	\$549,015	\$825,581
Design Assistance	191	1,137	1,070	8,127	97	161	493	\$666,338	\$682,944	\$280,846
Electronics	155	28	25	138	2	3	0	\$9,249	\$6,545	-\$299
Hot Water Efficiency	2,049	3,681	2,974	47,405	564	289	-4,886	\$2,533,046	\$1,027,974	\$370,164
Industrial Process Eff.	62	5,012	5,003	50,726	606	611	349	\$3,975,153	\$404,250	\$767,997
Lighting	34,832	60,482	55,406	591,686	9,906	7,785	-18,814	\$43,267,697	\$7,704,029	\$12,525,037
Motors	2,572	3,574	3,308	47,286	374	666	1,168	\$4,032,663	\$709,520	\$1,102,028
Other Efficiency	4,611	1	0	6	0	0	1	\$768	\$460,854	-\$371,821
Other Indirect Activity	315	0	0	0	0	0	0	\$0	\$2,058,085	-\$443,390
Refrigeration	2,581	9,030	8,557	116,584	1,027	919	9,813	\$10,296,902	\$1,897,806	\$2,163,994
Space Heat Efficiency	8,458	10,341	10,099	163,200	2,243	247	5,648	\$11,509,729	\$5,558,755	\$3,462,342
Space Heat Fuel Switch	1	67	75	2,017	5	0	282	\$244,544	\$12,296	\$41,521
Ventilation	708	468	430	5,582	42	154	2,446	\$994,598	\$116,365	\$332,426
Water Conservation	98	0	0	0	0	0	0	\$15,573	\$100	\$5,171
<b>Totals</b>		99,607	92,611	1,077,374	15,436	11,529	-1,816	\$82,359,871	\$21,684,791	\$21,598,202

## 6.11 Electric Resource Acquisition - Utility Breakdown

Utility	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Barton	164	235	213	2,590	39	27	343	\$263,351	\$59,483	\$66,308
Burlington	690	449	465	2,697	99	51	-57	\$221,105	\$158,203	-\$34,785
Enosburg Falls	343	683	623	7,962	115	97	-100	\$595,748	\$136,461	\$281,654
Green Mountain	41,824	80,429	74,971	865,269	12,376	9,419	-1,467	\$66,337,615	\$17,450,287	\$17,286,094
Hardwick	492	476	433	5,151	84	47	-162	\$349,166	\$131,530	\$70,597
Hyde Park	257	403	367	4,410	75	34	-90	\$291,982	\$78,474	\$69,231
Jacksonville	42	59	52	625	9	7	-35	\$40,431	\$13,889	\$14,529
Johnson	130	145	136	1,475	26	11	-32	\$92,988	\$29,102	\$44,363
Ludlow	360	1,446	1,366	15,340	178	119	525	\$1,175,750	\$231,880	\$248,472
Lyndonville	650	1,303	1,193	15,088	209	113	602	\$1,287,614	\$320,732	\$401,974
Morrisville	710	1,456	1,391	15,332	217	181	-254	\$1,171,677	\$192,076	\$337,265
Northfield	198	427	389	5,131	78	69	229	\$510,835	\$76,692	\$87,273
Orleans	77	203	180	2,519	30	26	-37	\$188,841	\$39,586	\$22,245
Stowe	762	1,620	1,510	14,866	242	191	796	\$1,294,494	\$222,827	\$278,201
Swanton	477	807	741	8,486	129	124	-240	\$700,709	\$234,439	\$121,447
VT Electric Coop	4,534	7,910	7,204	92,191	1,259	866	-1,521	\$6,572,062	\$1,893,737	\$1,952,658
Washington Electric	1,200	1,556	1,380	18,241	270	147	-315	\$1,265,503	\$415,392	\$350,679
<b>Totals</b>	<b>52,910</b>	<b>99,607</b>	<b>92,611</b>	<b>1,077,374</b>	<b>15,436</b>	<b>11,529</b>	<b>-1,816</b>	<b>\$82,359,871</b>	<b>\$21,684,791</b>	<b>\$21,598,202</b>

## 6.12 Electric Resource Acquisition - County Breakdown

County	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Addison	3,488	6,513	6,091	70,582	1,016	722	839	\$5,495,062	\$1,709,271	\$1,294,497
Bennington	3,690	8,989	8,327	81,419	1,489	1,086	-347	\$6,195,773	\$1,488,573	\$2,452,659
Caledonia	2,338	3,806	3,476	44,548	588	380	-249	\$3,288,542	\$877,080	\$1,189,694
Chittenden	13,200	22,233	20,704	246,739	3,416	2,825	210	\$19,588,961	\$4,639,030	\$4,939,809
Essex	290	467	406	5,280	84	43	-121	\$360,448	\$159,875	\$59,848
Franklin	3,554	8,518	7,982	91,446	1,316	1,153	-1,986	\$7,012,556	\$1,692,318	\$1,613,693
Grand Isle	660	795	726	8,979	148	79	-93	\$658,817	\$215,774	\$135,775
Lamoille	2,455	4,284	4,027	42,239	672	498	170	\$3,288,357	\$667,340	\$831,013
Orange	1,912	3,578	3,223	43,191	572	404	-401	\$3,056,743	\$835,165	\$834,127
Orleans	2,275	4,827	4,414	56,460	719	551	-521	\$4,108,131	\$886,005	\$1,373,228
Rutland	6,821	13,197	12,497	142,643	1,912	1,384	-668	\$10,851,885	\$2,999,464	\$3,055,671
Washington	5,486	8,728	8,070	91,237	1,389	945	902	\$7,157,088	\$2,445,378	\$1,293,790
Windham	3,070	5,472	5,063	57,859	878	562	1,431	\$4,334,221	\$1,258,673	\$1,053,728
Windsor	3,671	8,200	7,606	94,751	1,237	896	-984	\$6,963,286	\$1,810,847	\$1,470,670
<b>Totals</b>	52,910	99,607	92,611	1,077,374	15,436	11,529	-1,816	\$82,359,871	\$21,684,791	\$21,598,202

## 6.13 Electric Resource Acquisition Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$80,579,579
Fossil Fuel Savings (Costs)	(\$51,022)	\$417,600
Water Savings (Costs)	\$58,032	\$1,362,691
<b>Total</b>	<b>\$7,010</b>	<b>\$82,359,871</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>92,611</b>	<b>87,629</b>	<b>99,607</b>
Winter on peak	35,996	34,000	39,032
Winter off peak	28,637	27,117	30,452
Summer on peak	15,703	14,846	17,073
Summer off peak	12,275	11,667	13,055
<u>Coincident Demand Savings (kW)</u>			
Winter	14,592	13,869	15,436
Shoulder	0	0	0
Summer	10,958	10,368	11,529

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>22,223</b>	<b>13,496</b>	<b>167,643</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>(169)</b>	<b>(1,816)</b>	<b>43,998</b>
LP	10,649	8,714	128,560
NG	2,301	2,443	50,749
Oil/Kerosene	(12,206)	(11,897)	(121,506)
Wood	(908)	(1,073)	(13,757)
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>\$897,884</b>	<b>\$843,154</b>	<b>\$8,720,132</b>

<b>Net Societal Benefits</b>	<b>\$85,240,977</b>
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## 6.14 Electric Business Energy Services Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>
<b># participants with installations</b>	9,240	8,446	25,433
<b><u>Operating Costs</u></b>			
Administration	\$1,243,100	\$1,193,183	\$4,215,768
Programs and Implementation	\$2,177,446	\$2,154,612	\$6,155,416
<u>Strategy and Planning</u>	<u>\$591,010</u>	<u>\$546,445</u>	<u>\$1,707,871</u>
<b>Subtotal Operating Costs</b>	<b><u>\$4,011,556</u></b>	<b><u>\$3,894,240</u></b>	<b><u>\$12,079,056</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$4,952,352	\$4,613,684	\$14,060,633
<u>Services to Trade Allies</u>	<u>\$855,006</u>	<u>\$856,301</u>	<u>\$2,588,956</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$5,807,358</u></b>	<b><u>\$5,469,985</u></b>	<b><u>\$16,649,589</u></b>
<b><u>Support Services</u></b>			
Consulting	\$147,545	\$72,689	\$346,296
Customer Support	\$48,997	\$45,532	\$149,671
Data and Technical Services	\$483,838	\$494,157	\$1,416,837
Information Technology	\$0	\$0	\$0
Marketing	\$1,385,614	\$1,401,802	\$4,059,880
Policy & Public Affairs	\$1,513	\$0	\$10,963
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$2,067,508</u></b>	<b><u>\$2,014,181</u></b>	<b><u>\$5,983,646</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$8,677,109	\$9,292,242	\$31,034,577
<u>Incentives to Trade Allies</u>	<u>\$379,298</u>	<u>\$512,109</u>	<u>\$891,607</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$9,056,407</u></b>	<b><u>\$9,804,351</u></b>	<b><u>\$31,926,183</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$20,942,829</u></b>	<b><u>\$21,182,758</u></b>	<b><u>\$66,638,475</u></b>
<b>Total Participant Costs</b>	<b>\$18,302,516</b>	<b>\$14,220,154</b>	<b>\$46,283,463</b>
<b>Total Third Party Costs</b>	<b><u>\$27,672</u></b>	<b><u>\$15,200</u></b>	<b><u>\$44,172</u></b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$39,273,017</u></b>	<b><u>\$35,418,112</u></b>	<b><u>\$112,966,110</u></b>
<b><u>Annualized MWh Savings</u></b>			
Annualized MWh Savings	69,369	65,264	220,557
Lifetime MWh Savings	762,256	699,480	2,342,107
TRB Savings (2018 \$)	\$62,747,794	\$53,971,132	\$186,225,046
Winter Coincident Peak kW Savings	8,441	7,608	26,411
Summer Coincident Peak kW Savings	9,695	9,022	31,569
Annualized MWh Savings/Participant	7.507	7.727	8.672
Weighted Lifetime	11.0	10.7	10.6

## 6.15 Electric Business Energy Services - End Use Breakdown

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	103	1,224	1,157	17,684	56	165	114	\$1,308,591	\$153,820	\$511,823
Behavior Change	7	2,445	2,154	3,047	285	207	125	\$190,179	\$92,816	-\$20,271
Cooking and Laundry	36	85	77	1,002	11	14	114	\$154,331	\$37,859	\$13,245
Design Assistance	110	1,137	1,070	8,127	97	161	493	\$666,338	\$662,773	\$269,219
Hot Water Efficiency	71	201	176	2,485	31	19	-170	\$150,033	\$61,114	\$57,020
Industrial Process Eff.	62	5,012	5,003	50,726	606	611	349	\$3,975,153	\$404,250	\$767,997
Lighting	6,955	42,385	39,090	445,082	5,031	6,541	-18,768	\$32,801,258	\$4,303,202	\$8,449,779
Motors	77	2,398	2,274	30,101	274	299	1,168	\$2,498,315	\$284,449	\$601,264
Other Efficiency	451	0	0	0	0	0	0	\$0	\$13,543	-\$13,543
Other Indirect Activity	86	0	0	0	0	0	0	\$0	\$1,621,149	-\$438,270
Refrigeration	424	8,175	7,546	107,071	949	822	9,813	\$9,617,032	\$1,030,009	\$2,462,156
Space Heat Efficiency	681	1,792	1,637	28,588	237	44	2,106	\$1,899,883	\$450,654	\$1,410,688
Space Heat Fuel Switch	1	67	75	2,017	5	0	-326	-\$463	\$5,300	\$24,517
Ventilation	39	342	318	3,549	26	140	1,445	\$705,263	\$103,532	\$124,130
Water Conservation	2	0	0	0	0	0	0	\$5,220	\$100	\$400
<b>Totals</b>		65,264	60,578	699,480	7,608	9,022	-3,536	\$53,971,132	\$9,224,571	\$14,220,154

## 6.16 Electric Residential Energy Services Summary

	<u>Prior Year</u> 2019	<u>Current Year</u> 2020	<u>Cumulative</u> starting 1/1/18
<b># participants with installations</b>	67,817	44,464	196,189
<b><u>Operating Costs</u></b>			
Administration	\$1,637,746	\$1,405,408	\$4,513,573
Programs and Implementation	\$2,975,983	\$2,655,516	\$8,041,642
<u>Strategy and Planning</u>	<u>\$450,295</u>	<u>\$262,948</u>	<u>\$1,192,228</u>
<b>Subtotal Operating Costs</b>	<b><u>\$5,064,024</u></b>	<b><u>\$4,323,873</u></b>	<b><u>\$13,747,443</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$1,946,358	\$1,625,588	\$5,544,110
<u>Services to Trade Allies</u>	<u>\$277,891</u>	<u>\$254,739</u>	<u>\$802,691</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$2,224,248</u></b>	<b><u>\$1,880,328</u></b>	<b><u>\$6,346,801</u></b>
<b><u>Support Services</u></b>			
Consulting	\$163,404	\$20,375	\$354,962
Customer Support	\$68,168	\$51,567	\$168,695
Data and Technical Services	\$211,612	\$110,779	\$558,120
Information Technology	\$0	\$0	\$0
Marketing	\$1,465,648	\$983,272	\$3,540,754
Policy & Public Affairs	\$1,101	\$0	\$7,540
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$1,909,933</u></b>	<b><u>\$1,165,993</u></b>	<b><u>\$4,630,072</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$12,895,459	\$12,466,164	\$36,109,243
<u>Incentives to Trade Allies</u>	<u>\$463,246</u>	<u>\$414,809</u>	<u>\$1,025,385</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$13,358,705</u></b>	<b><u>\$12,880,973</u></b>	<b><u>\$37,134,628</u></b>
<b><u>Total Efficiency Vermont Costs</u></b>	<b><u>\$22,556,911</u></b>	<b><u>\$20,251,167</u></b>	<b><u>\$61,858,944</u></b>
<b>Total Participant Costs</b>	\$9,149,761	\$7,378,048	\$27,534,425
<b><u>Total Third Party Costs</u></b>	<b><u>\$34,567</u></b>	<b><u>\$116,427</u></b>	<b><u>\$240,829</u></b>
<b><u>Total Resource Acquisition Costs</u></b>	<b><u>\$31,741,239</u></b>	<b><u>\$27,745,642</u></b>	<b><u>\$89,634,198</u></b>
<b><u>Annualized MWh Savings</u></b>			
Annualized MWh Savings	46,787	34,343	135,207
Lifetime MWh Savings	454,218	377,894	1,288,483
TRB Savings (2018 \$)	\$39,363,991	\$28,388,739	\$107,247,119
Winter Coincident Peak kW Savings	11,254	7,827	32,701
Summer Coincident Peak kW Savings	3,659	2,507	11,321
Annualized MWh Savings/Participant	0.690	0.772	0.689
Weighted Lifetime	9.7	11.0	9.5

## 6.17 Electric Residential Energy Services - End Use Breakdown

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	1,754	564	566	5,306	17	162	0	\$517,433	\$249,616	\$45,051
Cooking and Laundry	1,463	1,466	1,709	17,578	199	147	1,329	\$2,643,078	\$511,155	\$812,336
Design Assistance	81	0	0	0	0	0	0	\$0	\$20,171	\$11,627
Electronics	155	28	25	138	2	3	0	\$9,249	\$6,545	-\$299
Hot Water Efficiency	1,978	3,480	2,799	44,920	534	270	-4,716	\$2,383,013	\$966,860	\$313,145
Lighting	27,877	18,097	16,315	146,604	4,875	1,244	-45	\$10,466,439	\$3,400,828	\$4,075,258
Motors	2,495	1,176	1,034	17,184	100	367	0	\$1,534,347	\$425,071	\$500,764
Other Efficiency	4,160	1	0	6	0	0	1	\$768	\$447,310	-\$358,278
Other Indirect Activity	229	0	0	0	0	0	0	\$0	\$436,936	-\$5,120
Refrigeration	2,157	855	1,011	9,512	78	97	0	\$679,870	\$867,797	-\$298,161
Space Heat Efficiency	7,777	8,549	8,462	134,612	2,006	203	3,542	\$9,609,847	\$5,108,102	\$2,051,654
Space Heat Fuel Switch	0	0	0	0	0	0	608	\$245,007	\$6,996	\$17,004
Ventilation	669	127	112	2,033	16	14	1,001	\$289,335	\$12,833	\$208,296
Water Conservation	96	0	0	0	0	0	0	\$10,353	\$0	\$4,771
<b>Totals</b>		34,343	32,034	377,894	7,827	2,507	1,720	\$28,388,739	\$12,460,220	\$7,378,048

## 6.18 Thermal Energy and Process Fuels Resource Acquisition Summary

Services				Business Energy Services		Residential Energy Services		
	Efficiency Vermont Services and Initiatives	Subtotal Business Energy Services	Subtotal Residential Energy Services	Business New Construction	Business Existing Facilities	Residential New Construction	Efficient Products	Existing Homes <sup>2</sup>
<b>Costs</b>								
Year to Date Costs	\$8,614,630	\$1,085,910	\$7,528,719	\$0	\$1,085,910	\$9,222	\$838,378	\$6,681,119
Annual Budget Estimate <sup>1</sup>	\$8,614,750	\$1,296,605	\$7,318,145	\$0	\$1,296,605	\$0	\$553,180	\$6,764,965
Unspent Annual Budget Estimate	\$120	\$210,695	(\$210,574)	(\$0)	\$210,695	(\$9,222)	(\$285,197)	\$83,845
% Annual Budget Estimate Unspent	0%	16%	-3%	0%	16%	0%	-52%	1%
<b>Savings Results</b>								
MMBtu Year to Date	92,049	35,799	56,250	-	35,799	-	37,845	18,405
MMBtu Cumulative starting 1/1/18	397,947	190,615	207,332	4,136	186,479	3,427	144,573	59,332
3-Year MMBtu Goal	388,700	229,027	159,673	4,136	224,891	3,427	100,673	55,573
% of 3-Year MMBtu Goal	102%	83%	130%	100%	83%	100%	144%	107%
<b>Associated Electric Benefits</b>								
MWh Year to Date	(417)	94	(511)	-	94	-	17	(528)
MWh Cumulative starting 1/1/18	(8,005)	(385)	(7,619)	(16)	(369)	22	(7,212)	(430)
Lifetime MWh Year to Date	(7,835)	1,053	(8,888)	-	1,053	-	290	(9,178)
Lifetime MWh Cumulative starting 1/1/18	(123,222)	(10,333)	(112,890)	(127)	(10,205)	325	(107,164)	(6,050)
Winter Coincident Peak kW Year to Date	(132)	(18)	(114)	0	(18)	0	14	(128)
Winter Coincident Peak kW Cumulative starting 1/1/18	(1,645)	(159)	(1,486)	5	(164)	16	(1,397)	(105)
Summer Coincident Peak kW Year to Date	23	45	(22)	0	45	0	(0)	(22)
Summer Coincident Peak kW Cumulative starting 1/1/18	(334)	(31)	(303)	6	(37)	10	(284)	(28)
<b>Participation</b>								
Partic.w/ installs Year to Date	4,291	182	4,109	-	182	2	1,908	2,199
Partic.w/ installs Cumulative starting 1/1/18	14,123	699	13,424	34	665	84	7,640	5,700

<sup>1</sup> Annual budgets are provided for information purposes only. Efficiency Vermont operates under three-year Commission approved budgets.

<sup>2</sup> Annual incremental net MMBtu savings include savings funded by Thermal Energy and Process Fuels, Act 62 Weatherization, and the State Weatherization Grant

## 6.19 Thermal Energy and Process Fuels Resource Acquisition

	<u>Prior Year</u> 2019	<u>Current Year</u> 2020	<u>Cumulative</u> starting 1/1/18
<b># participants with installations</b>	4,890	4,291	14,123
<b><u>Operating Costs</u></b>			
Administration	\$667,902	\$583,765	\$1,890,368
Programs and Implementation	\$1,454,688	\$1,422,132	\$4,128,153
<u>Strategy and Planning</u>	<u>\$111,714</u>	<u>\$72,252</u>	<u>\$404,033</u>
<b>Subtotal Operating Costs</b>	<b><u>\$2,234,305</u></b>	<b><u>\$2,078,150</u></b>	<b><u>\$6,422,553</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$587,970	\$452,114	\$1,740,787
<u>Services to Trade Allies</u>	<u>\$28,630</u>	<u>\$14,771</u>	<u>\$86,703</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$616,600</u></b>	<b><u>\$466,885</u></b>	<b><u>\$1,827,490</u></b>
<b><u>Support Services</u></b>			
Consulting	\$46,627	\$6,374	\$157,652
Customer Support	\$28,909	\$34,231	\$98,055
Data and Technical Services	\$87,061	\$102,728	\$263,000
Information Technology	\$0	\$0	\$0
Marketing	\$499,380	\$355,976	\$1,253,145
Policy & Public Affairs	\$988	\$0	\$1,172
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$662,965</u></b>	<b><u>\$499,309</u></b>	<b><u>\$1,773,024</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$5,393,247	\$5,332,936	\$16,087,613
<u>Incentives to Trade Allies</u>	<u>\$214,100</u>	<u>\$237,350</u>	<u>\$599,148</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$5,607,347</u></b>	<b><u>\$5,570,286</u></b>	<b><u>\$16,686,761</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$9,121,218</u></b>	<b><u>\$8,614,630</u></b>	<b><u>\$26,709,829</u></b>
<b>Total Participant Costs</b>	<b>\$12,408,933</b>	<b>\$11,389,954</b>	<b>\$41,909,549</b>
<b>Total Third Party Costs</b>	<b><u>\$223,803</u></b>	<b><u>\$168,726</u></b>	<b><u>\$687,731</u></b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$21,753,953</u></b>	<b><u>\$20,173,309</u></b>	<b><u>\$69,307,109</u></b>
<b>Annualized MMBtu Savings</b>			
Annualized MMBtu Savings	128,273	92,049	397,947
Lifetime MMBtu Savings	1,849,479	1,430,509	6,040,877
TRB Savings (2018 \$)	\$26,072,435	\$20,212,695	\$87,045,142
Annualized MMBtu Savings/Participant	26.232	21.452	28.177
Weighted Lifetime	14.4	15.5	15.2

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

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	2	2	2	38	0	0	21	\$8,992	\$226	\$10,495
Cooking and Laundry	17	0	0	0	0	0	299	\$81,913	\$13,438	-\$3,310
Design Assistance	12	226	220	3,050	6	51	3,279	\$713,700	\$87,455	\$1,263,500
Hot Water Efficiency	269	-168	-152	-1,929	-15	-23	4,043	\$631,929	\$93,550	\$119,007
Industrial Process Eff.	22	-13	-13	-128	0	0	5,561	\$1,085,801	\$65,940	\$229,222
Motors	2	63	56	626	3	10	1,640	\$324,809	\$28,325	\$51,000
Other Efficiency	1,186	0	0	0	0	0	0	\$0	\$3,434	-\$3,434
Other Fuel Switch	1	0	0	-7	0	0	100	\$11,525	\$2,000	\$10,368
Other Indirect Activity	39	0	0	0	0	0	0	\$0	\$364,377	-\$160,841
Refrigeration	1	0	0	0	0	0	211	\$42,250	\$1,000	-\$520
Space Heat Efficiency	3,247	97	92	1,676	13	6	44,618	\$7,972,224	\$3,815,086	\$6,243,907
Space Heat Fuel Switch	671	-624	-593	-11,175	-141	-25	30,927	\$9,154,746	\$824,977	\$3,508,677
Ventilation	43	1	1	15	2	3	1,351	\$184,807	\$17,590	\$121,882
<b>Totals</b>		-417	-387	-7,835	-132	23	92,049	\$20,212,695	\$5,317,398	\$11,389,954

## 6.21 Thermal Energy and Process Fuels Resource Acquisition

### Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	(\$458,203)
Fossil Fuel Savings (Costs)	\$1,756,437	\$20,649,412
<u>Water Savings (Costs)</u>	<u>\$1,103</u>	<u>\$21,485</u>
<b>Total</b>	<b>\$1,757,540</b>	<b>\$20,212,695</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>(387)</b>	<b>(368)</b>	<b>(417)</b>
Winter on peak	(192)	(182)	(209)
Winter off peak	(221)	(209)	(234)
Summer on peak	16	14	16
Summer off peak	10	9	10
<u>Coincident Demand Savings (kW)</u>			
Winter	(125)	(119)	(132)
Shoulder	0	0	0
Summer	23	21	23

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>285</b>	<b>257</b>	<b>2,565</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>102,608</b>	<b>92,049</b>	<b>1,430,509</b>
LP	26,963	24,651	343,534
NG	8	7	181
Oil/Kerosene	56,126	48,808	800,175
Wood	16,208	15,494	263,965
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>(\$65,508)</b>	<b>(\$53,766)</b>	<b>(\$977,254)</b>

<b>Net Societal Benefits</b>	<b>\$14,044,402</b>
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## 6.22 Thermal Energy and Process Fuels Business Energy Services Summary

	<u>Prior Year</u> 2019	<u>Current Year</u> 2020	<u>Cumulative</u> starting 1/1/18
<b># participants with installations</b>	194	182	699
<b><u>Operating Costs</u></b>			
Administration	\$91,332	\$83,368	\$394,138
Programs and Implementation	\$34,453	\$27,066	\$114,303
<u>Strategy and Planning</u>	\$17,715	\$6,027	\$46,087
<b>Subtotal Operating Costs</b>	<b>\$143,500</b>	<b>\$116,461</b>	<b>\$554,528</b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$172,084	\$130,113	\$506,211
<u>Services to Trade Allies</u>	\$6,103	\$520	\$12,982
<b>Subtotal Technical Assistance Costs</b>	<b>\$178,187</b>	<b>\$130,633</b>	<b>\$519,193</b>
<b><u>Support Services</u></b>			
Consulting	\$4,681	\$2,761	\$20,784
Customer Support	\$244	\$672	\$2,751
Data and Technical Services	\$26,766	\$27,671	\$70,963
Information Technology	\$0	\$0	\$0
Marketing	\$1,298	\$749	\$17,638
Policy & Public Affairs	(\$3)	\$0	\$43
<u>Other</u>	\$0	\$0	\$0
<b>Subtotal Support Services Costs</b>	<b>\$32,985</b>	<b>\$31,853</b>	<b>\$112,178</b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$720,214	\$801,964	\$3,455,171
<u>Incentives to Trade Allies</u>	\$7,900	\$5,000	\$19,900
<b>Subtotal Incentive Costs</b>	<b>\$728,114</b>	<b>\$806,964</b>	<b>\$3,475,071</b>
<b>Total Efficiency Vermont Costs</b>	<b>\$1,082,786</b>	<b>\$1,085,910</b>	<b>\$4,660,970</b>
<b>Total Participant Costs</b>	<b>\$3,537,236</b>	<b>\$3,965,614</b>	<b>\$12,544,883</b>
<b>Total Third Party Costs</b>	<b>\$26,005</b>	<b>\$19,228</b>	<b>\$85,233</b>
<b>Total Resource Acquisition Costs</b>	<b>\$4,646,027</b>	<b>\$5,070,753</b>	<b>\$17,291,086</b>
<b><u>Annualized MMBtu Savings</u></b>			
Annualized MMBtu Savings	64,076	35,799	190,615
Lifetime MMBtu Savings	709,791	508,411	2,573,112
TRB Savings (2018 \$)	\$10,221,820	\$7,881,092	\$42,685,886
Annualized MMBtu Savings/Participant	330.290	196.699	272.697
Weighted Lifetime	11.1	14.2	13.5

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

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	2	2	2	38	0	0	21	\$8,992	\$226	\$10,495
Cooking and Laundry	14	0	0	0	0	0	299	\$81,913	\$13,438	-\$3,760
Design Assistance	12	226	220	3,050	6	51	3,279	\$713,700	\$87,455	\$1,263,500
Hot Water Efficiency	10	-94	-93	-952	-4	-17	2,914	\$421,497	\$44,221	\$90,766
Industrial Process Eff.	22	-13	-13	-128	0	0	5,561	\$1,085,801	\$65,940	\$229,222
Motors	2	63	56	626	3	10	1,640	\$324,809	\$28,325	\$51,000
Other Efficiency	24	0	0	0	0	0	0	\$0	\$0	\$0
Other Fuel Switch	1	0	0	-7	0	0	100	\$11,525	\$2,000	\$10,368
Other Indirect Activity	5	0	0	0	0	0	0	\$0	\$149,659	-\$137,029
Refrigeration	1	0	0	0	0	0	211	\$42,250	\$1,000	-\$520
Space Heat Efficiency	84	23	22	414	1	2	12,242	\$2,357,235	\$178,446	\$719,143
Space Heat Fuel Switch	29	-114	-101	-2,002	-25	-4	8,219	\$2,657,389	\$214,564	\$1,664,889
Ventilation	11	1	1	16	2	3	1,315	\$175,981	\$16,590	\$67,540
<b>Totals</b>		94	94	1,053	-18	45	35,799	\$7,881,092	\$801,864	\$3,965,614

## 6.24 Thermal Energy and Process Fuels Residential Energy Services Summary

	<u>Prior Year</u> 2018	<u>Current Year</u> 2019	<u>Cumulative</u> starting 1/1/18
<b># participants with installations</b>	4,696	4,109	13,424
<b><u>Operating Costs</u></b>			
Administration	\$576,570	\$500,397	\$1,496,230
Programs and Implementation	\$1,420,235	\$1,395,066	\$4,013,850
Strategy and Planning	\$93,999	\$66,225	\$357,946
<b>Subtotal Operating Costs</b>	<b><u>\$2,090,805</u></b>	<b><u>\$1,961,689</u></b>	<b><u>\$5,868,026</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$415,886	\$322,001	\$1,234,576
Services to Trade Allies	\$22,527	\$14,251	\$73,721
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$438,413</u></b>	<b><u>\$336,252</u></b>	<b><u>\$1,308,297</u></b>
<b><u>Support Services</u></b>			
Consulting	\$41,946	\$3,613	\$136,868
Customer Support	\$28,666	\$33,560	\$95,304
Data and Technical Services	\$60,295	\$75,057	\$192,038
Information Technology	\$0	\$0	\$0
Marketing	\$498,082	\$355,227	\$1,235,507
Policy & Public Affairs	\$992	\$0	\$1,130
Other	\$0	\$0	\$0
<b>Subtotal Support Services Costs</b>	<b><u>\$629,980</u></b>	<b><u>\$467,456</u></b>	<b><u>\$1,660,846</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$4,673,033	\$4,530,972	\$12,632,442
Incentives to Trade Allies	\$206,200	\$232,350	\$579,248
<b>Subtotal Incentive Costs</b>	<b><u>\$4,879,233</u></b>	<b><u>\$4,763,322</u></b>	<b><u>\$13,211,690</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$8,038,431</u></b>	<b><u>\$7,528,719</u></b>	<b><u>\$22,048,859</u></b>
<b>Total Participant Costs</b>	<b>\$8,871,697</b>	<b>\$7,424,339</b>	<b>\$29,364,666</b>
<b>Total Third Party Costs</b>	<b><u>\$197,798</u></b>	<b><u>\$149,498</u></b>	<b><u>\$602,498</u></b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$17,107,926</u></b>	<b><u>\$15,102,557</u></b>	<b><u>\$52,016,023</u></b>
<b><u>Annualized MMBtu Savings</u></b>			
Annualized MMBtu Savings	64,197	56,250	207,332
Lifetime MMBtu Savings	1,139,689	922,098	3,467,764
TRB Savings (2018 \$)	\$15,850,615	\$12,331,603	\$44,359,256
Annualized MMBtu Savings/Participant	13.671	13.689	15.445
Weighted Lifetime	17.8	16.4	16.7

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

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Cooking and Laundry	3	0	0	0	0	0	0	\$0	\$0	\$450
Hot Water Efficiency	259	-74	-60	-977	-11	-6	1,129	\$210,432	\$49,330	\$28,241
Other Efficiency	1,162	0	0	0	0	0	0	\$0	\$3,434	-\$3,434
Other Indirect Activity	34	0	0	0	0	0	0	\$0	\$214,718	-\$23,812
Space Heat Efficiency	3,163	73	70	1,263	12	5	32,376	\$5,614,989	\$3,636,640	\$5,524,763
Space Heat Fuel Switch	642	-510	-491	-9,174	-115	-21	22,708	\$6,497,357	\$610,413	\$1,843,788
Ventilation	32	0	0	-1	0	0	36	\$8,826	\$1,000	\$54,343
<b>Totals</b>		-511	-481	-8,888	-114	-22	56,250	\$12,331,603	\$4,515,534	\$7,424,339

## 7.1 Electric Business New Construction Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>
<b># participants with installations</b>	71	47	206
<b><u>Operating Costs</u></b>			
Administration	\$135,043	\$88,942	\$362,775
Programs and Implementation	\$232,536	\$220,405	\$641,496
Strategy and Planning	<u>\$61,801</u>	<u>\$52,871</u>	<u>\$222,384</u>
<b>Subtotal Operating Costs</b>	<b><u>\$429,380</u></b>	<b><u>\$362,218</u></b>	<b><u>\$1,226,655</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$682,790	\$563,123	\$1,948,964
Services to Trade Allies	<u>\$75,530</u>	<u>\$72,480</u>	<u>\$258,821</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$758,320</u></b>	<b><u>\$635,603</u></b>	<b><u>\$2,207,784</u></b>
<b><u>Support Services</u></b>			
Consulting	\$8,806	\$8,555	\$34,644
Customer Support	\$6,520	\$5,497	\$21,135
Data and Technical Services	\$29,027	\$41,875	\$124,554
Information Technology	\$0	\$0	\$0
Marketing	\$145,637	\$139,596	\$471,706
Policy & Public Affairs	\$159	\$0	\$1,336
Other	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$190,149</u></b>	<b><u>\$195,522</u></b>	<b><u>\$653,375</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$981,638	\$665,836	\$2,432,301
Incentives to Trade Allies	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$981,638</u></b>	<b><u>\$665,836</u></b>	<b><u>\$2,432,301</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$2,359,488</u></b>	<b><u>\$1,859,179</u></b>	<b><u>\$6,520,116</u></b>
<b>Total Participant Costs</b>	\$3,012,003	\$1,160,841	\$5,184,057
<b>Total Third Party Costs</b>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Total Resource Acquisition Costs</b>	<b><u>\$5,371,490</u></b>	<b><u>\$3,020,020</u></b>	<b><u>\$11,704,173</u></b>
<b><u>Annualized MWh Savings</u></b>			
Annualized MWh Savings	9,258	4,230	18,351
Lifetime MWh Savings	134,089	64,545	266,201
TRB Savings (2018 \$)	\$13,473,545	\$5,339,697	\$24,404,914
Winter Coincident Peak kW Savings	1,107	534	2,303
Summer Coincident Peak kW Savings	1,381	587	2,720
Annualized MWh Savings/Participant	130.401	89.999	89.082
Weighted Lifetime	14.5	15.3	14.5

## 7.2 Electric Business New Construction - End Use Breakdown

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	14	200	175	3,121	6	30	66	\$255,990	\$42,243	\$62,772
Cooking and Laundry	12	51	46	618	7	8	102	\$108,280	\$9,934	\$10,910
Design Assistance	7	0	0	0	0	0	0	\$0	\$25,910	\$8,173
Hot Water Efficiency	3	9	8	81	0	3	125	\$27,775	\$840	\$24,480
Industrial Process Eff.	5	112	107	1,740	20	12	0	\$130,141	\$33,988	\$53,539
Lighting	30	1,498	1,317	21,854	232	247	-473	\$1,724,991	\$134,716	\$317,645
Motors	10	457	400	6,237	58	65	328	\$547,661	\$40,347	\$62,202
Other Indirect Activity	6	0	0	0	0	0	0	\$0	\$129,733	-\$32,773
Refrigeration	15	1,837	1,619	29,620	186	203	0	\$2,080,183	\$224,172	\$556,598
Space Heat Efficiency	14	40	35	909	6	1	461	\$184,031	\$11,445	\$56,650
Ventilation	15	27	23	365	18	17	868	\$275,424	\$12,409	\$40,245
Water Conservation	2	0	0	0	0	0	0	\$5,220	\$100	\$400
<b>Totals</b>		4,230	3,731	64,545	534	587	1,476	\$5,339,697	\$665,836	\$1,160,841

## 7.3 Electric Business New Construction Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$4,960,027
Fossil Fuel Savings (Costs)	\$19,897	\$334,246
Water Savings (Costs)	\$1,919	\$45,424
<b>Total</b>	<b>\$21,816</b>	<b>\$5,339,697</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>3,731</b>	<b>3,721</b>	<b>4,230</b>
Winter on peak	1,340	1,335	1,533
Winter off peak	1,055	1,054	1,184
Summer on peak	745	743	854
Summer off peak	590	589	659
<u>Coincident Demand Savings (kW)</u>			
Winter	481	479	534
Shoulder	0	0	0
Summer	530	528	587

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>454</b>	<b>446</b>	<b>5,476</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>1,480</b>	<b>1,476</b>	<b>24,309</b>
LP	920	918	14,508
NG	411	411	7,578
Oil/Kerosene	151	151	2,270
Wood	0	0	0
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>\$11,976</b>	<b>\$11,976</b>	<b>\$233,914</b>

<b>Net Societal Benefits</b>	<b>\$5,699,564</b>
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## 7.4 Electric Business Existing Facilities Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting</u> <u>1/1/18</u>
<b># participants with installations</b>	9,169	8,399	25,227
<b><u>Operating Costs</u></b>			
Administration	\$1,108,057	\$1,104,241	\$3,852,993
Programs and Implementation	\$1,944,910	\$1,934,208	\$5,513,920
<u>Strategy and Planning</u>	<u>\$529,209</u>	<u>\$493,574</u>	<u>\$1,485,487</u>
<b>Subtotal Operating Costs</b>	<b><u>\$3,582,176</u></b>	<b><u>\$3,532,023</u></b>	<b><u>\$10,852,401</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$4,269,562	\$4,050,561	\$12,111,669
<u>Services to Trade Allies</u>	<u>\$779,476</u>	<u>\$783,821</u>	<u>\$2,330,136</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$5,049,038</u></b>	<b><u>\$4,834,381</u></b>	<b><u>\$14,441,805</u></b>
<b><u>Support Services</u></b>			
Consulting	\$138,739	\$64,134	\$311,652
Customer Support	\$42,477	\$40,036	\$128,535
Data and Technical Services	\$454,811	\$452,283	\$1,292,283
Information Technology	\$0	\$0	\$0
Marketing	\$1,239,977	\$1,262,207	\$3,588,174
Policy & Public Affairs	\$1,354	\$0	\$9,627
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$1,877,358</u></b>	<b><u>\$1,818,659</u></b>	<b><u>\$5,330,271</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$7,695,471	\$8,626,406	\$28,602,275
<u>Incentives to Trade Allies</u>	<u>\$379,298</u>	<u>\$512,109</u>	<u>\$891,607</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$8,074,769</u></b>	<b><u>\$9,138,515</u></b>	<b><u>\$29,493,882</u></b>
<b><u>Total Efficiency Vermont Costs</u></b>	<b><u>\$18,583,341</u></b>	<b><u>\$19,323,579</u></b>	<b><u>\$60,118,359</u></b>
<b>Total Participant Costs</b>	\$15,290,514	\$13,059,313	\$41,099,406
<b>Total Third Party Costs</b>	<u>\$27,672</u>	<u>\$15,200</u>	<u>\$44,172</u>
<b>Total Resource Acquisition Costs</b>	<b><u>\$33,901,527</u></b>	<b><u>\$32,398,091</u></b>	<b><u>\$101,261,937</u></b>
<b>Annualized MWh Savings</b>	60,110	61,034	202,206
<b>Lifetime MWh Savings</b>	628,167	634,935	2,075,907
<b>TRB Savings (2018 \$)</b>	\$49,274,250	\$48,631,435	\$161,820,132
<b>Winter Coincident Peak kW Savings</b>	7,334	7,075	24,108
<b>Summer Coincident Peak kW Savings</b>	8,314	8,436	28,849
<b>Annualized MWh Savings/Participant</b>	6.556	7.267	8.015
<b>Weighted Lifetime</b>	10.5	10.4	10.3

## 7.5 Electric Business Existing Facilities - End Use Breakdown

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	89	1,024	982	14,563	50	135	48	\$1,052,600	\$111,578	\$449,051
Behavior Change	7	2,445	2,154	3,047	285	207	125	\$190,179	\$92,816	-\$20,271
Cooking and Laundry	24	34	31	384	5	5	13	\$46,051	\$27,925	\$2,336
Design Assistance	103	1,137	1,070	8,127	97	161	493	\$666,338	\$636,863	\$261,046
Hot Water Efficiency	68	192	168	2,404	31	16	-295	\$122,258	\$60,274	\$32,540
Industrial Process Eff.	57	4,900	4,897	48,987	586	598	349	\$3,845,012	\$370,263	\$714,458
Lighting	6,925	40,887	37,773	423,228	4,799	6,294	-18,295	\$31,076,266	\$4,168,486	\$8,132,134
Motors	67	1,942	1,873	23,865	215	233	840	\$1,950,655	\$244,102	\$539,062
Other Efficiency	451	0	0	0	0	0	0	\$0	\$13,543	-\$13,543
Other Indirect Activity	80	0	0	0	0	0	0	\$0	\$1,491,416	-\$405,498
Refrigeration	409	6,338	5,927	77,451	763	619	9,813	\$7,536,849	\$805,837	\$1,905,557
Space Heat Efficiency	667	1,752	1,602	27,679	231	44	1,645	\$1,715,852	\$439,209	\$1,354,038
Space Heat Fuel Switch	1	67	75	2,017	5	0	-326	-\$463	\$5,300	\$24,517
Ventilation	24	315	295	3,184	8	122	577	\$429,839	\$91,123	\$83,885
<b>Totals</b>		61,034	56,847	634,935	7,075	8,436	-5,012	\$48,631,435	\$8,558,735	\$13,059,313

## 7.6 Electric Business Existing Facilities Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$49,189,865
Fossil Fuel Savings (Costs)	(\$86,599)	(\$598,434)
<u>Water Savings (Costs)</u>	<u>\$1,820</u>	<u>\$40,004</u>
<b>Total</b>	<b>(\$84,779)</b>	<b>\$48,631,435</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>56,847</b>	<b>53,653</b>	<b>61,034</b>
Winter on peak	22,727	21,411	24,579
Winter off peak	15,618	14,803	16,623
Summer on peak	10,897	10,245	11,782
Summer off peak	7,605	7,195	8,051
<u>Coincident Demand Savings (kW)</u>			
Winter	6,702	6,357	7,075
Shoulder	0	0	0
Summer	8,047	7,586	8,436

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>449</b>	<b>423</b>	<b>4,812</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>(5,089)</b>	<b>(5,012)</b>	<b>(43,510)</b>
LP	8,243	7,841	97,806
NG	(1,143)	(1,030)	(16,676)
Oil/Kerosene	(12,433)	(12,027)	(126,148)
Wood	245	203	1,508
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>\$714,181</b>	<b>\$670,413</b>	<b>\$7,102,726</b>

<b>Net Societal Benefits</b>	<b>\$54,680,918</b>
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## 7.7 Electric Residential New Construction Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>
<b># participants with installations</b>	627	586	2,006
<b><u>Operating Costs</u></b>			
Administration	\$184,673	\$142,370	\$526,808
Programs and Implementation	\$269,712	\$464,054	\$1,033,222
Strategy and Planning	\$57,834	\$61,340	\$191,779
<b>Subtotal Operating Costs</b>	<b><u>\$512,218</u></b>	<b><u>\$667,764</u></b>	<b><u>\$1,751,810</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$1,177,530	\$1,086,636	\$3,465,756
Services to Trade Allies	\$31,764	\$48,515	\$100,400
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$1,209,294</u></b>	<b><u>\$1,135,151</u></b>	<b><u>\$3,566,156</u></b>
<b><u>Support Services</u></b>			
Consulting	\$18,081	\$17,067	\$59,853
Customer Support	\$6,664	\$7,045	\$22,158
Data and Technical Services	\$10,940	\$26,766	\$59,690
Information Technology	\$0	\$0	\$0
Marketing	\$130,761	\$154,938	\$440,556
Policy & Public Affairs	\$173	\$0	\$1,319
Other	\$0	\$0	\$0
<b>Subtotal Support Services Costs</b>	<b><u>\$166,619</u></b>	<b><u>\$205,816</u></b>	<b><u>\$583,576</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$1,443,493	\$1,132,968	\$3,940,579
Incentives to Trade Allies	\$0	\$0	\$0
<b>Subtotal Incentive Costs</b>	<b><u>\$1,443,493</u></b>	<b><u>\$1,132,968</u></b>	<b><u>\$3,940,579</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$3,331,623</u></b>	<b><u>\$3,141,699</u></b>	<b><u>\$9,842,121</u></b>
<b>Total Participant Costs</b>	<b><u>\$432,669</u></b>	<b><u>\$321,183</u></b>	<b><u>\$1,501,143</u></b>
<b>Total Third Party Costs</b>	<b><u>\$17,800</u></b>	<b><u>\$7,200</u></b>	<b><u>\$90,000</u></b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$3,782,092</u></b>	<b><u>\$3,470,083</u></b>	<b><u>\$11,433,264</u></b>
<b><u>Annualized MWh Savings</u></b>			
Annualized MWh Savings	2,053	1,017	5,208
Lifetime MWh Savings	37,131	16,118	94,975
TRB Savings (2018 \$)	\$5,027,150	\$2,750,129	\$15,793,711
Winter Coincident Peak kW Savings	367	178	1,034
Summer Coincident Peak kW Savings	153	74	466
Annualized MWh Savings/Participant	3.274	1.735	2.596
Weighted Lifetime	18.1	15.9	18.2

## 7.8 Electric Residential New Construction - End Use Breakdown

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Cooking and Laundry	347	33	29	412	7	5	70	\$82,173	\$41,939	-\$6,486
Design Assistance	81	0	0	0	0	0	0	\$0	\$20,171	\$11,627
Hot Water Efficiency	268	20	18	268	3	2	1,392	\$328,206	\$44,191	-\$18,883
Lighting	420	475	420	4,728	85	47	-40	\$333,777	\$296,150	-\$109,595
Other Indirect Activity	197	0	0	0	0	0	0	\$0	\$360,208	-\$540
Refrigeration	400	15	14	251	1	2	0	\$18,063	\$63,837	-\$59,769
Space Heat Efficiency	213	374	317	8,863	69	8	3,536	\$1,479,854	\$294,270	\$320,663
Space Heat Fuel Switch	0	0	0	0	0	0	608	\$245,007	\$6,996	\$17,004
Ventilation	467	101	89	1,597	13	11	982	\$252,695	\$5,208	\$162,390
Water Conservation	96	0	0	0	0	0	0	\$10,353	\$0	\$4,771
<b>Totals</b>		1,017	886	16,118	178	74	6,548	\$2,750,129	\$1,132,968	\$321,183

## 7.9 Electric Residential New Construction Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$1,028,041
Fossil Fuel Savings (Costs)	\$121,261	\$1,557,594
Water Savings (Costs)	\$7,701	\$164,494
<b>Total</b>	<b>\$128,962</b>	<b>\$2,750,129</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>886</b>	<b>896</b>	<b>1,017</b>
Winter on peak	317	322	369
Winter off peak	376	382	429
Summer on peak	90	90	104
Summer off peak	102	102	114
<u>Coincident Demand Savings (kW)</u>			
Winter	158	160	178
Shoulder	0	0	0
Summer	66	66	74

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>1,832</b>	<b>1,791</b>	<b>19,772</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>6,478</b>	<b>6,548</b>	<b>124,522</b>
LP	2,436	2,470	47,564
NG	2,962	2,993	58,942
Oil/Kerosene	969	969	15,200
Wood	111	116	2,816
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>\$14,918</b>	<b>\$14,896</b>	<b>\$98,226</b>

<b>Net Societal Benefits</b>	<b>\$1,472,379</b>
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## 7.10 Electric Efficient Products Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>
<b># participants with installations</b>	62,700	40,567	184,668
<b><u>Operating Costs</u></b>			
Administration	\$1,098,353	\$985,908	\$3,116,441
Programs and Implementation	\$1,289,933	\$862,378	\$3,273,420
<u>Strategy and Planning</u>	<u>\$216,243</u>	<u>\$101,100</u>	<u>\$563,844</u>
<b>Subtotal Operating Costs</b>	<b><u>\$2,604,529</u></b>	<b><u>\$1,949,386</u></b>	<b><u>\$6,953,705</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$227,195	\$224,956	\$937,496
<u>Services to Trade Allies</u>	<u>\$155,964</u>	<u>\$120,305</u>	<u>\$488,901</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$383,159</u></b>	<b><u>\$345,261</u></b>	<b><u>\$1,426,397</u></b>
<b><u>Support Services</u></b>			
Consulting	\$54,727	\$758	\$97,679
Customer Support	\$18,035	\$19,301	\$62,586
Data and Technical Services	\$42,648	\$41,374	\$178,920
Information Technology	\$0	\$0	\$0
Marketing	\$780,767	\$522,263	\$1,874,609
Policy & Public Affairs	\$557	\$0	\$4,483
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$896,733</u></b>	<b><u>\$583,696</u></b>	<b><u>\$2,218,277</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$8,842,499	\$8,946,326	\$25,549,122
<u>Incentives to Trade Allies</u>	<u>\$457,046</u>	<u>\$387,631</u>	<u>\$986,257</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$9,299,544</u></b>	<b><u>\$9,333,958</u></b>	<b><u>\$26,535,379</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$13,183,965</u></b>	<b><u>\$12,212,300</u></b>	<b><u>\$37,133,758</u></b>
<b>Total Participant Costs</b>	\$8,488,049	\$7,008,986	\$25,980,776
<b>Total Third Party Costs</b>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Total Resource Acquisition Costs</b>	<b><u>\$21,672,015</u></b>	<b><u>\$19,221,286</u></b>	<b><u>\$63,114,534</u></b>
<b><u>Annualized MWh Savings</u></b>			
Annualized MWh Savings	41,034	31,442	122,544
Lifetime MWh Savings	380,503	341,559	1,120,886
TRB Savings (2018 \$)	\$29,702,227	\$24,138,080	\$83,856,128
Winter Coincident Peak kW Savings	10,085	7,254	30,086
Summer Coincident Peak kW Savings	3,209	2,307	10,264
Annualized MWh Savings/Participant	0.654	0.775	0.664
Weighted Lifetime	9.3	10.9	9.1

## 7.11 Electric Efficient Products - End Use Breakdown

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	1,696	555	558	5,227	17	159	0	\$510,497	\$224,409	\$50,756
Cooking and Laundry	935	1,271	1,537	16,248	170	126	1,042	\$2,408,042	\$292,029	\$825,535
Electronics	155	28	25	138	2	3	0	\$9,249	\$6,545	-\$299
Hot Water Efficiency	1,378	3,326	2,660	43,240	515	260	-6,109	\$1,886,948	\$916,400	\$308,635
Lighting	25,915	16,941	15,293	138,532	4,604	1,137	-5	\$9,868,449	\$2,975,794	\$4,022,084
Motors	2,495	1,176	1,034	17,184	100	367	0	\$1,534,347	\$425,071	\$500,764
Other Efficiency	2,545	1	0	6	0	0	1	\$768	\$429,163	-\$320,109
Refrigeration	1,154	607	792	7,915	56	70	0	\$567,845	\$219,292	-\$42,716
Space Heat Efficiency	6,554	7,539	7,539	113,068	1,789	185	0	\$7,351,934	\$3,451,514	\$1,664,334
<b>Totals</b>		31,442	29,439	341,559	7,254	2,307	-5,071	\$24,138,080	\$8,940,215	\$7,008,986

## 7.12 Electric Efficient Products Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$24,068,379
Fossil Fuel Savings (Costs)	(\$110,503)	(\$903,571)
Water Savings (Costs)	\$37,249	\$973,272
<b>Total</b>	<b>(\$73,253)</b>	<b>\$24,138,080</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>29,439</b>	<b>27,699</b>	<b>31,442</b>
Winter on peak	10,957	10,298	11,822
Winter off peak	10,916	10,228	11,486
Summer on peak	3,780	3,581	4,118
Summer off peak	3,787	3,592	4,020
<u>Coincident Demand Savings (kW)</u>			
Winter	6,885	6,517	7,254
Shoulder	0	0	0
Summer	2,200	2,075	2,307

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>17,289</b>	<b>8,663</b>	<b>121,264</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>(3,280)</b>	<b>(5,071)</b>	<b>(64,525)</b>
LP	(1,051)	(2,614)	(32,642)
NG	(7)	(9)	(104)
Oil/Kerosene	(956)	(1,054)	(13,681)
Wood	(1,265)	(1,393)	(18,097)
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>\$149,264</b>	<b>\$138,350</b>	<b>\$1,246,908</b>

<b>Net Societal Benefits</b>	<b>\$24,335,172</b>
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## 7.13 Electric Existing Homes Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>
<b># participants with installations</b>	4,490	3,311	9,515
<b><u>Operating Costs</u></b>			
Administration	\$354,720	\$277,130	\$870,324
Programs and Implementation	\$1,416,338	\$1,329,085	\$3,734,999
<u>Strategy and Planning</u>	<u>\$176,218</u>	<u>\$100,508</u>	<u>\$436,605</u>
<b>Subtotal Operating Costs</b>	<b><u>\$1,947,277</u></b>	<b><u>\$1,706,723</u></b>	<b><u>\$5,041,928</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$541,633	\$313,997	\$1,140,857
<u>Services to Trade Allies</u>	<u>\$90,163</u>	<u>\$85,919</u>	<u>\$213,391</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$631,796</u></b>	<b><u>\$399,916</u></b>	<b><u>\$1,354,248</u></b>
<b><u>Support Services</u></b>			
Consulting	\$90,596	\$2,549	\$197,430
Customer Support	\$43,470	\$25,222	\$83,951
Data and Technical Services	\$158,024	\$42,639	\$319,510
Information Technology	\$0	\$0	\$0
Marketing	\$554,120	\$306,071	\$1,225,589
Policy & Public Affairs	\$371	\$0	\$1,738
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$846,581</u></b>	<b><u>\$376,482</u></b>	<b><u>\$1,828,218</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$2,609,468	\$2,386,869	\$6,619,543
<u>Incentives to Trade Allies</u>	<u>\$6,200</u>	<u>\$27,177</u>	<u>\$39,127</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$2,615,668</u></b>	<b><u>\$2,414,047</u></b>	<b><u>\$6,658,670</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$6,041,322</u></b>	<b><u>\$4,897,167</u></b>	<b><u>\$14,883,065</u></b>
<b>Total Participant Costs</b>	<b>\$229,043</b>	<b>\$47,879</b>	<b>\$52,506</b>
<b>Total Third Party Costs</b>	<b>\$16,767</b>	<b>\$109,227</b>	<b>\$150,829</b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$6,287,132</u></b>	<b><u>\$5,054,273</u></b>	<b><u>\$15,086,400</u></b>
<b><u>Annualized MWh Savings</u></b>			
Annualized MWh Savings	3,701	1,884	7,455
Lifetime MWh Savings	36,584	20,216	72,623
TRB Savings (2018 \$)	\$4,634,614	\$1,500,530	\$7,597,279
Winter Coincident Peak kW Savings	802	395	1,582
Summer Coincident Peak kW Savings	297	126	591
Annualized MWh Savings/Participant	0.824	0.569	0.783
Weighted Lifetime	9.9	10.7	9.7

## 7.14 Electric Existing Homes - End Use Breakdown

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	58	9	8	79	0	2	0	\$6,936	\$25,207	-\$5,705
Cooking and Laundry	181	163	143	918	22	17	217	\$152,862	\$177,188	-\$6,713
Hot Water Efficiency	332	135	121	1,412	15	9	1	\$167,860	\$6,269	\$23,393
Lighting	1,542	681	603	3,344	187	60	0	\$264,214	\$128,885	\$162,768
Other Efficiency	1,615	0	0	0	0	0	0	\$0	\$18,147	-\$38,169
Other Indirect Activity	32	0	0	0	0	0	0	\$0	\$76,728	-\$4,580
Refrigeration	603	233	206	1,347	20	25	0	\$93,961	\$584,668	-\$195,677
Space Heat Efficiency	1,010	636	605	12,681	148	10	6	\$778,058	\$1,362,319	\$66,656
Ventilation	202	26	23	436	3	3	19	\$36,640	\$7,625	\$45,906
<b>Totals</b>		1,884	1,709	20,216	395	126	242	\$1,500,530	\$2,387,036	\$47,879

## 7.15 Electric Existing Homes Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$1,333,267
Fossil Fuel Savings (Costs)	\$4,922	\$27,765
<u>Water Savings (Costs)</u>	<u>\$9,342</u>	<u>\$139,498</u>
<b>Total</b>	<b>\$14,264</b>	<b>\$1,500,530</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>1,709</b>	<b>1,660</b>	<b>1,884</b>
Winter on peak	655	634	728
Winter off peak	673	649	729
Summer on peak	190	187	215
Summer off peak	191	189	211
<u>Coincident Demand Savings (kW)</u>			
Winter	366	355	395
Shoulder	0	0	0
Summer	114	113	126

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>2,200</b>	<b>2,172</b>	<b>16,319</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>243</b>	<b>242</b>	<b>3,203</b>
LP	100	100	1,324
NG	78	78	1,010
Oil/Kerosene	64	64	854
Wood	1	1	16
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>\$7,544</b>	<b>\$7,519</b>	<b>\$38,358</b>

<b>Net Societal Benefits</b>	<b>(\$947,057)</b>
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## 7.16 Thermal Energy and Process Fuels Business New Construction Summary

	<u>Prior Year</u> 2019	<u>Current Year</u> 2020	<u>Cumulative</u> starting 1/1/18
<b># participants with installations</b>	0	0	34
<b><u>Operating Costs</u></b>			
Administration	\$0	\$0	\$9,855
Programs and Implementation	\$0	\$0	\$2,154
<u>Strategy and Planning</u>	<u>\$0</u>	<u>\$0</u>	<u>\$826</u>
<b>Subtotal Operating Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$12,835</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$0	\$0	\$11,901
<u>Services to Trade Allies</u>	<u>\$0</u>	<u>\$0</u>	<u>\$242</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$12,143</u></b>
<b><u>Support Services</u></b>			
Consulting	\$0	\$0	\$507
Customer Support	\$0	\$0	\$49
Data and Technical Services	\$0	\$0	\$627
Information Technology	\$0	\$0	\$0
Marketing	\$0	\$0	\$592
Policy & Public Affairs	\$0	\$0	\$2
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$1,777</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$0	\$0	\$87,787
<u>Incentives to Trade Allies</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$87,787</u></b>
<b><u>Total Efficiency Vermont Costs</u></b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$114,542</u></b>
<b>Total Participant Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$350,723</b>
<b>Total Third Party Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>
<b><u>Total Resource Acquisition Costs</u></b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$465,265</u></b>
<b><u>Annualized MMBtu Savings</u></b>			
Annualized MMBtu Savings	-	-	4,136
Lifetime MMBtu Savings	-	-	66,785
TRB Savings (2018 \$)	\$0	\$0	\$1,035,633
Annualized MMBtu Savings/Participant	-	-	121.636
Weighted Lifetime	0.0	0.0	16.1

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

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
	0	0	0	0	0	0	0	0	0	0
<b>Totals</b>		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	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$0
Fossil Fuel Savings (Costs)	\$0	\$0
<u>Water Savings (Costs)</u>	<u>\$0</u>	<u>\$0</u>
<b>Total</b>	<b>\$0</b>	<b>\$0</b>

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

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>0</b>	<b>0</b>	<b>0</b>
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
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

<b>Net Societal Benefits</b>	<b>(\$0)</b>
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## 7.19 Thermal Energy and Process Fuels Business Existing Facilities Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>
<b># participants with installations</b>	194	182	665
<b><u>Operating Costs</u></b>			
Administration	\$91,332	\$83,368	\$384,283
Programs and Implementation	\$34,453	\$27,066	\$112,149
<u>Strategy and Planning</u>	<u>\$17,715</u>	<u>\$6,027</u>	<u>\$45,261</u>
<b>Subtotal Operating Costs</b>	<b><u>\$143,500</u></b>	<b><u>\$116,461</u></b>	<b><u>\$541,693</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$172,084	\$130,113	\$494,310
<u>Services to Trade Allies</u>	<u>\$6,103</u>	<u>\$520</u>	<u>\$12,741</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$178,187</u></b>	<b><u>\$130,633</u></b>	<b><u>\$507,051</u></b>
<b><u>Support Services</u></b>			
Consulting	\$4,681	\$2,761	\$20,277
Customer Support	\$244	\$672	\$2,702
Data and Technical Services	\$26,766	\$27,671	\$70,335
Information Technology	\$0	\$0	\$0
Marketing	\$1,298	\$749	\$17,046
Policy & Public Affairs	(\$3)	\$0	\$41
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$32,985</u></b>	<b><u>\$31,853</u></b>	<b><u>\$110,401</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$720,214	\$801,964	\$3,367,384
<u>Incentives to Trade Allies</u>	<u>\$7,900</u>	<u>\$5,000</u>	<u>\$19,900</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$728,114</u></b>	<b><u>\$806,964</u></b>	<b><u>\$3,387,284</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$1,082,786</u></b>	<b><u>\$1,085,910</u></b>	<b><u>\$4,546,428</u></b>
<b>Total Participant Costs</b>	<b>\$3,537,236</b>	<b>\$3,965,614</b>	<b>\$12,194,161</b>
<b>Total Third Party Costs</b>	<b><u>\$26,005</u></b>	<b><u>\$19,228</u></b>	<b><u>\$85,233</u></b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$4,646,027</u></b>	<b><u>\$5,070,753</u></b>	<b><u>\$16,825,821</u></b>
<b><u>Annualized MMBtu Savings</u></b>			
Annualized MMBtu Savings	64,076	35,799	186,479
Lifetime MMBtu Savings	709,791	508,411	2,506,327
TRB Savings (2018 \$)	\$10,221,820	\$7,881,092	\$41,650,252
Annualized MMBtu Savings/Participant	330.290	196.699	280.420
Weighted Lifetime	11.1	14.2	13.4

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

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Air Conditioning Eff.	2	2	2	38	0	0	21	\$8,992	\$226	\$10,495
Cooking and Laundry	14	0	0	0	0	0	299	\$81,913	\$13,438	-\$3,760
Design Assistance	12	226	220	3,050	6	51	3,279	\$713,700	\$87,455	\$1,263,500
Hot Water Efficiency	10	-94	-93	-952	-4	-17	2,914	\$421,497	\$44,221	\$90,766
Industrial Process Eff.	22	-13	-13	-128	0	0	5,561	\$1,085,801	\$65,940	\$229,222
Motors	2	63	56	626	3	10	1,640	\$324,809	\$28,325	\$51,000
Other Efficiency	24	0	0	0	0	0	0	\$0	\$0	\$0
Other Fuel Switch	1	0	0	-7	0	0	100	\$11,525	\$2,000	\$10,368
Other Indirect Activity	5	0	0	0	0	0	0	\$0	\$149,659	-\$137,029
Refrigeration	1	0	0	0	0	0	211	\$42,250	\$1,000	-\$520
Space Heat Efficiency	84	23	22	414	1	2	12,242	\$2,357,235	\$178,446	\$719,143
Space Heat Fuel Switch	29	-114	-101	-2,002	-25	-4	8,219	\$2,657,389	\$214,564	\$1,664,889
Ventilation	11	1	1	16	2	3	1,315	\$175,981	\$16,590	\$67,540
<b>Totals</b>		94	94	1,053	-18	45	35,799	\$7,881,092	\$801,864	\$3,965,614

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

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$141,470
Fossil Fuel Savings (Costs)	\$600,317	\$7,739,621
Water Savings (Costs)	\$0	\$0
<b>Total</b>	<b>\$600,317</b>	<b>\$7,881,092</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>94</b>	<b>82</b>	<b>94</b>
Winter on peak	9	6	7
Winter off peak	(5)	(7)	(8)
Summer on peak	50	46	53
Summer off peak	40	37	41
<u>Coincident Demand Savings (kW)</u>			
Winter	(16)	(16)	(18)
Shoulder	0	0	0
Summer	45	41	45

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>40,597</b>	<b>35,799</b>	<b>508,411</b>
LP	11,062	10,168	127,034
NG	0	0	0
Oil/Kerosene	21,628	18,446	309,286
Wood	4,601	4,096	49,437
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>(\$1,452)</b>	<b>(\$1,160)</b>	<b>(\$24,371)</b>

<b>Net Societal Benefits</b>	<b>\$7,740,158</b>
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## 7.22 Thermal Energy and Process Fuels Residential New Construction Summary

	<u>Prior Year</u> 2019	<u>Current Year</u> 2020	<u>Cumulative</u> starting 1/1/18
<b># participants with installations</b>	0	2	84
<b><u>Operating Costs</u></b>			
Administration	\$0	\$756	\$18,756
Programs and Implementation	\$0	\$0	\$145
<u>Strategy and Planning</u>	<u>\$0</u>	<u>\$0</u>	<u>\$2,225</u>
<b>Subtotal Operating Costs</b>	<b><u>\$0</u></b>	<b><u>\$756</u></b>	<b><u>\$21,126</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$0	\$476	\$3,901
<u>Services to Trade Allies</u>	<u>\$0</u>	<u>\$0</u>	<u>\$560</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$0</u></b>	<b><u>\$476</u></b>	<b><u>\$4,461</u></b>
<b><u>Support Services</u></b>			
Consulting	\$0	\$0	\$12,005
Customer Support	\$0	\$199	\$404
Data and Technical Services	\$0	\$0	\$947
Information Technology	\$0	\$0	\$0
Marketing	\$0	\$291	\$2,250
Policy & Public Affairs	\$0	\$0	\$5
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$0</u></b>	<b><u>\$490</u></b>	<b><u>\$15,611</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$0	\$7,500	\$164,629
<u>Incentives to Trade Allies</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$0</u></b>	<b><u>\$7,500</u></b>	<b><u>\$164,629</u></b>
<b><u>Total Efficiency Vermont Costs</u></b>	<b><u>\$0</u></b>	<b><u>\$9,222</u></b>	<b><u>\$205,826</u></b>
<b>Total Participant Costs</b>	\$0	(\$7,500)	\$44,294
<b>Total Third Party Costs</b>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b><u>Total Resource Acquisition Costs</u></b>	<b><u>\$0</u></b>	<b><u>\$1,722</u></b>	<b><u>\$250,121</u></b>
<b>Annualized MMBtu Savings</b>	-	-	3,427
<b>Lifetime MMBtu Savings</b>	-	-	63,771
<b>TRB Savings (2018 \$)</b>	\$0	\$0	\$1,092,907
<b>Annualized MMBtuSavings/Participant</b>	-	-	40.796
<b>Weighted Lifetime</b>	0.0	0.0	18.6

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

<b>End Use</b>	<b># of Participants</b>	<b>Net MWH Saved</b>	<b>Gross MWH Saved</b>	<b>Net Lifetime MWH Saved</b>	<b>Net Winter KW Saved</b>	<b>Net Summer KW Saved</b>	<b>Net Other Fuel MMBTU Saved</b>	<b>Net TRB Saved</b>	<b>Participant Incentives Paid</b>	<b>Participant Costs</b>
Space Heat Efficiency	2	0	0	0	0	0	0	\$0	\$7,500	-\$7,500
<b>Totals</b>		0	0	0	0	0	0	\$0	\$7,500	-\$7,500

## 7.24 Thermal Energy and Process Fuels

### Residential New Construction Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$0
Fossil Fuel Savings (Costs)	\$0	\$0
<u>Water Savings (Costs)</u>	<u>\$0</u>	<u>\$0</u>
<b>Total</b>	<b>\$0</b>	<b>\$0</b>

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

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>0</b>	<b>0</b>	<b>0</b>
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
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

<b>Net Societal Benefits</b>	<b>(\$1,337)</b>
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## 7.25 Thermal Energy and Process Fuels Efficient Products Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>
<b># participants with installations</b>	2,430	1,908	7,640
<b><u>Operating Costs</u></b>			
Administration	\$119,023	\$75,312	\$367,202
Programs and Implementation	\$13,697	\$17,841	\$54,671
Strategy and Planning	\$8,986	\$2,648	\$20,918
<b>Subtotal Operating Costs</b>	<b><u>\$141,705</u></b>	<b><u>\$95,800</u></b>	<b><u>\$442,791</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$1,548	\$497	\$11,472
Services to Trade Allies	<u>\$1,487</u>	<u>\$228</u>	<u>\$3,530</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$3,036</u></b>	<b><u>\$725</u></b>	<b><u>\$15,002</u></b>
<b><u>Support Services</u></b>			
Consulting	\$6,635	\$3	\$17,166
Customer Support	\$26	\$76	\$489
Data and Technical Services	\$1,338	\$3,565	\$10,539
Information Technology	\$0	\$0	\$0
Marketing	\$10,035	\$42	\$19,366
Policy & Public Affairs	(\$2)	\$0	\$14
Other	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$18,032</u></b>	<b><u>\$3,686</u></b>	<b><u>\$47,573</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$1,043,350	\$738,166	\$3,353,635
Incentives to Trade Allies	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$1,043,350</u></b>	<b><u>\$738,166</u></b>	<b><u>\$3,353,635</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$1,206,122</u></b>	<b><u>\$838,378</u></b>	<b><u>\$3,859,002</u></b>
<b>Total Participant Costs</b>	\$2,917,964	\$2,305,316	\$11,430,541
<b>Total Third Party Costs</b>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Total Resource Acquisition Costs</b>	<b><u>\$4,124,087</u></b>	<b><u>\$3,143,694</u></b>	<b><u>\$15,289,543</u></b>
<b>Annualized MMBtu Savings</b>	43,316	37,845	144,573
<b>Lifetime MMBtu Savings</b>	692,869	525,635	2,122,601
<b>TRB Savings (2018 \$)</b>	9,181,973	\$6,754,477	\$24,024,036
<b>Annualized MMBtu Savings/Participant</b>	17.825	19.835	18.923
<b>Weighted Lifetime</b>	16.0	13.9	14.7

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

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Hot Water Efficiency	80	-63	-51	-824	-10	-5	922	\$155,858	\$48,650	\$18,042
Other Efficiency	9	0	0	0	0	0	0	\$0	\$3,434	-\$3,434
Space Heat Efficiency	1,401	19	17	6	4	5	20,437	\$1,379,325	\$390,682	\$1,068,447
Space Heat Fuel Switch	429	62	68	1,108	20	0	16,486	\$5,219,294	\$298,500	\$1,222,261
<b>Totals</b>		17	34	290	14	0	37,845	\$6,754,477	\$741,266	\$2,305,316

## 7.27 Thermal Energy and Process Fuels Efficient Products Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$22,095
Fossil Fuel Savings (Costs)	\$752,947	\$6,732,382
Water Savings (Costs)	\$0	\$0
<b>Total</b>	<b>\$752,947</b>	<b>\$6,754,477</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>34</b>	<b>15</b>	<b>17</b>
Winter on peak	12	5	5
Winter off peak	27	17	20
Summer on peak	(3)	(3)	(4)
Summer off peak	(3)	(3)	(4)
<u>Coincident Demand Savings (kW)</u>			
Winter	18	13	14
Shoulder	0	0	0
Summer	0	(0)	(0)

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>41,883</b>	<b>37,845</b>	<b>525,635</b>
LP	9,640	8,747	93,001
NG	0	0	0
Oil/Kerosene	22,744	19,631	262,045
Wood	9,501	9,468	170,589
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>(\$60,290)</b>	<b>(\$49,563)</b>	<b>(\$892,140)</b>

<b>Net Societal Benefits</b>	<b>\$7,024,114</b>
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## 7.28 Thermal Energy and Process Fuels Existing Homes Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>
<b># participants with installations</b>	2,266	2,199	5,700
<b><u>Operating Costs</u></b>			
Administration	\$457,547	\$424,329	\$1,110,272
Programs and Implementation	\$1,406,539	\$1,377,226	\$3,959,033
Strategy and Planning	\$85,013	\$63,577	\$334,803
<b>Subtotal Operating Costs</b>	<b><u>\$1,949,099</u></b>	<b><u>\$1,865,132</u></b>	<b><u>\$5,404,108</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$414,338	\$321,028	\$1,219,202
Services to Trade Allies	\$21,040	\$14,023	\$69,631
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$435,378</u></b>	<b><u>\$335,051</u></b>	<b><u>\$1,288,833</u></b>
<b><u>Support Services</u></b>			
Consulting	\$35,311	\$3,610	\$107,697
Customer Support	\$28,640	\$33,284	\$94,411
Data and Technical Services	\$58,957	\$71,493	\$180,552
Information Technology	\$0	\$0	\$0
Marketing	\$488,047	\$354,893	\$1,213,891
Policy & Public Affairs	\$993	\$0	\$1,111
Other	\$0	\$0	\$0
<b>Subtotal Support Services Costs</b>	<b><u>\$611,948</u></b>	<b><u>\$463,279</u></b>	<b><u>\$1,597,663</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$3,629,684	\$3,785,306	\$9,114,178
Incentives to Trade Allies	\$206,200	\$232,350	\$579,248
<b>Subtotal Incentive Costs</b>	<b><u>\$3,835,884</u></b>	<b><u>\$4,017,656</u></b>	<b><u>\$9,693,427</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$6,832,309</u></b>	<b><u>\$6,681,119</u></b>	<b><u>\$17,984,031</u></b>
<b>Total Participant Costs</b>	<b>\$5,953,732</b>	<b>\$5,126,523</b>	<b>\$17,889,830</b>
<b>Total Third Party Costs</b>	<b><u>\$197,798</u></b>	<b><u>\$149,498</u></b>	<b><u>\$602,498</u></b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$12,983,839</u></b>	<b><u>\$11,957,141</u></b>	<b><u>\$36,476,359</u></b>
<b>Annualized MMBtu Savings</b>	<b>20,881</b>	<b>18,405</b>	<b>59,332</b>
<b>Lifetime MMBtu Savings</b>	<b>446,820</b>	<b>396,463</b>	<b>1,281,392</b>
<b>TRB Savings (2018 \$)</b>	<b>\$6,668,642</b>	<b>\$5,577,127</b>	<b>\$19,242,313</b>
<b>Annualized MMBtu Savings/Participant</b>	<b>9.215</b>	<b>8.370</b>	<b>10.409</b>
<b>Weighted Lifetime</b>	<b>21.4</b>	<b>21.5</b>	<b>21.6</b>

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

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
Cooking and Laundry	3	0	0	0	0	0	0	\$0	\$0	\$450
Hot Water Efficiency	179	-10	-9	-153	-1	-1	208	\$54,575	\$680	\$10,199
Other Efficiency	1,153	0	0	0	0	0	0	\$0	\$0	\$0
Other Indirect Activity	34	0	0	0	0	0	0	\$0	\$214,718	-\$23,812
Space Heat Efficiency	1,760	54	53	1,257	8	0	11,939	\$4,235,664	\$3,238,458	\$4,463,816
Space Heat Fuel Switch	213	-572	-559	-10,281	-135	-21	6,222	\$1,278,062	\$311,913	\$621,527
Ventilation	32	0	0	-1	0	0	36	\$8,826	\$1,000	\$54,343
<b>Totals</b>		-528	-515	-9,178	-128	-22	18,405	\$5,577,127	\$3,766,768	\$5,126,523

## 7.30 Thermal Energy and Process Fuels Existing Homes Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	(\$621,768)
Fossil Fuel Savings (Costs)	\$403,174	\$6,177,409
Water Savings (Costs)	<u>\$1,103</u>	<u>\$21,485</u>
<b>Total</b>	<b>\$404,277</b>	<b>\$5,577,127</b>

Electric Energy & Demand Benefits	Savings at Meter		Savings at Generation
	Gross	Net	Net
<u>Annualized Energy Savings (MWh): Total</u>	<b>(515)</b>	<b>(465)</b>	<b>(528)</b>
Winter on peak	(213)	(193)	(221)
Winter off peak	(243)	(219)	(246)
Summer on peak	(32)	(29)	(33)
Summer off peak	(28)	(25)	(28)
<u>Coincident Demand Savings (kW)</u>			
Winter	(127)	(115)	(128)
Shoulder	0	0	0
Summer	(22)	(20)	(22)

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>285</b>	<b>257</b>	<b>2,565</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>20,129</b>	<b>18,405</b>	<b>396,463</b>
LP	6,261	5,736	123,498
NG	8	7	181
Oil/Kerosene	11,755	10,731	228,845
Wood	2,106	1,931	43,939
Solar	0	0	0
Other	0	0	0
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>(\$3,766)</b>	<b>(\$3,042)</b>	<b>(\$60,742)</b>

<b>Net Societal Benefits</b>	<b>(\$718,533)</b>
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## 8.1.1 Customer Credit Summary

	<u>Prior Year</u> <u>2019</u>	<u>Current Year</u> <u>2020</u>	<u>Cumulative</u> <u>starting 1/1/18</u>
<b># participants with installations</b>	0	0	1
<b><u>Operating Costs</u></b>			
Administration	\$0	\$0	\$938
Programs and Implementation	\$0	\$0	\$0
<u>Strategy and Planning</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Operating Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$938</u></b>
<b><u>Technical Assistance Costs</u></b>			
Services to Participants	\$0	\$0	\$3,539
<u>Services to Trade Allies</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Technical Assistance Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$3,539</u></b>
<b><u>Support Services</u></b>			
Consulting	\$0	\$0	\$0
Customer Support	\$0	\$0	\$0
Data and Technical Services	\$0	\$0	\$127
Information Technology	\$0	\$0	\$0
Marketing	\$0	\$0	\$0
Policy & Public Affairs	\$0	\$0	\$0
<u>Other</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Support Services Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$127</u></b>
<b><u>Incentive Costs</u></b>			
Incentives to Participants	\$0	\$0	\$238,717
<u>Incentives to Trade Allies</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Subtotal Incentive Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$238,717</u></b>
<b>Total Efficiency Vermont Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$243,322</u></b>
<b>Total Participant Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$238,717)</b>
<b>Total Third Party Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>
<b>Total Resource Acquisition Costs</b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>	<b><u>\$4,605</u></b>
<b><u>Annualized MWh Savings</u></b>			
Annualized MWh Savings	-	-	-
Lifetime MWh Savings	-	-	-
TRB Savings (2018 \$)	\$0	\$0	\$0
Winter Coincident Peak kW Savings	0	0	0
Summer Coincident Peak kW Savings	0	0	0
Annualized MWh Savings/Participant	-	-	-
Weighted Lifetime	0.0	0.0	0.0

### 8.1.2 Customer Credit - End Use Breakdown

End Use	# of Participants	Net MWH Saved	Gross MWH Saved	Net Lifetime MWH Saved	Net Winter KW Saved	Net Summer KW Saved	Net Other Fuel MMBTU Saved	Net TRB Saved	Participant Incentives Paid	Participant Costs
	0	0	0	0	0	0	0	0	0	0
<b>Totals</b>		0	0	0	0	0	0	0	0	0

### 8.1.3 Customer Credit Total Resource Benefits

Avoided Cost Benefits	2020	Lifetime (Present Value)
Avoided Cost of Electricity	nap	\$0
Fossil Fuel Savings (Costs)	\$0	\$0
<u>Water Savings (Costs)</u>	<u>\$0</u>	<u>\$0</u>
<b>Total</b>	<b>\$0</b>	<b>\$0</b>

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

Thermal & Other Benefits	Gross	Net	Lifetime Net
<b>Annualized Water Savings (ccf)</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Annualized fuel savings (increase) MMBtu Total</b>	<b>0</b>	<b>0</b>	<b>0</b>
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
<b>Annualized savings (increase) in O&amp;M(\$)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## 8.2.1 Designated Downtowns Summary

### BENEFITS TO VERMONT'S DESIGNATED DOWNTOWNS, NEW TOWN CENTERS AND GROWTH CENTERS All results are cumulative for the period March 2000 through December 2020<sup>1</sup>

Efficiency Vermont Service Area	Annual Net MWh Saved	Lifetime Net MWh Saved	Net Total Resource Benefits Delivered <sup>2</sup>
<b>Designated Downtowns<sup>3</sup></b>			
Barre City	3,798	55,689	\$6,007,833
Bellows Falls	787	9,392	\$1,077,573
Bennington	1,759	23,116	\$1,719,973
Brandon	1,404	18,188	\$1,515,514
Brattleboro	3,535	43,214	\$6,010,946
Bristol	1,035	13,083	\$1,397,736
Middlebury	4,089	47,098	\$4,023,749
Montpelier	8,213	107,468	\$12,941,168
Newport	3,472	46,879	\$4,281,463
Poultney	1,324	16,708	\$2,484,250
Randolph	932	14,312	\$1,331,181
Rutland	4,708	54,005	\$4,762,786
Saint Albans	5,675	80,720	\$5,192,963
Saint Johnsbury	3,364	47,049	\$4,334,904
Springfield	915	15,584	\$1,912,427
Stowe	639	6,729	\$782,115
Vergennes	591	9,391	\$659,202
Waterbury	1,426	16,403	\$1,572,633
White River Junction	1,185	16,191	\$1,424,742
Wilmington	458	6,317	\$1,160,823
Windsor	1,241	16,507	\$1,684,840
Winooski	5,124	70,544	\$5,708,932
<b>Totals:</b>	<b>55,675</b>	<b>734,588</b>	<b>\$71,987,754</b>
<b>New Town Centers<sup>3</sup></b>			
Colchester	451	7,810	\$1,143,959
South Burlington	7,950	102,068	\$6,336,926
<b>Totals:</b>	<b>8,401</b>	<b>109,878</b>	<b>\$7,480,884</b>
<b>Growth Centers<sup>3</sup></b>			
Bennington	27,195	345,616	\$39,562,909
Colchester	464	7,963	\$1,158,777
Hartford	10,347	146,724	\$15,095,696
Montpelier	16,888	216,616	\$25,952,184
Saint Albans City	16,667	221,041	\$16,352,801
Williston	13,225	170,846	\$14,015,031
<b>Totals:</b>	<b>84,786</b>	<b>1,108,806</b>	<b>\$112,137,397</b>

<sup>1</sup>The cumulative savings included in this table combine both Efficiency Vermont electric and thermal programs and services results. It includes all efficiency measures delivered by Efficiency Vermont for the Green Mountain Power Energy Efficiency Fund and Community Energy & Efficiency Development fund. Vermont Gas Service energy efficiency benefits are excluded from this report.

<sup>2</sup>Present Value of Lifetime Reductions in Electric, Fuel, and Water Costs.

<sup>3</sup>Vermont Agency of Commerce & Community Development (ACCD) - Department of Housing and Community Development (<http://accd.vermont.gov/community-development/designation-programs>)

Designated Downtown reporting is dependent upon mapping of electric utility premises to the designated areas. Efficiency Vermont coordinated with the applicable electric distribution utilities and the ACCD to complete the mapping process for the current areas as defined by ACCD in 2018.

**8.3.1. Incentive, Non-Incentive, and Administrative Cost Summary**

2020 Electric and Thermal 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			
<b>Program Costs</b>								
<b>Incentive and Technical Assistance Costs</b>								
<b>Incentive Costs</b>								
Incentives to Participants (RA)	\$665,836	\$9,428,370	\$1,140,468	\$9,684,493	\$6,172,176	\$0	\$27,091,342	1
Incentives to Trade Allies (RA)	\$0	\$517,109	\$0	\$387,631	\$259,527	\$0	\$1,164,268	2
<b>Sub-Total Incentive Costs</b>	<b>\$665,836</b>	<b>\$9,945,479</b>	<b>\$1,140,468</b>	<b>\$10,072,124</b>	<b>\$6,431,703</b>	<b>\$0</b>	<b>\$28,255,610</b>	<b>3</b>
<b>Technical Assistance Costs</b>								
Services to Participants (RA)	\$511,214	\$3,786,033	\$987,570	\$202,523	\$566,647	N/A	\$6,053,988	4
Services to Trade Allies (RA)	\$65,114	\$705,970	\$43,115	\$107,849	\$89,723	N/A	\$1,011,771	5
Energy Code and Standards Support (DSS)	N/A	N/A	N/A	N/A	N/A	\$24,111	\$24,111	6
Building Energy Labeling and Benchmarking (DSS)	N/A	N/A	N/A	N/A	N/A	\$31,117	\$31,117	7
Better Buildings by Design (DSS)	N/A	N/A	N/A	N/A	N/A	\$61,817	\$61,817	8
<b>Sub-Total Technical Assistance Costs</b>	<b>\$576,329</b>	<b>\$4,492,003</b>	<b>\$1,030,685</b>	<b>\$310,372</b>	<b>\$656,370</b>	<b>\$117,045</b>	<b>\$7,182,804</b>	<b>9</b>
<b>Sub-Total Incentive &amp; Technical Assistance Costs</b>	<b>\$1,242,165</b>	<b>\$14,437,482</b>	<b>\$2,171,153</b>	<b>\$10,382,496</b>	<b>\$7,088,073</b>	<b>\$117,045</b>	<b>\$35,438,414</b>	<b>10</b>
<b>Non-Incentive Program Costs</b>								
Programs and Implementation (RA)	\$168,215	\$1,490,179	\$370,690	\$717,286	\$2,400,833	N/A	\$5,147,203	11
Strategy and Planning (RA)	\$47,983	\$453,436	\$55,657	\$94,143	\$148,984	N/A	\$800,203	12
Marketing Program (RA)	\$126,756	\$1,146,794	\$140,931	\$474,338	\$600,159	N/A	\$2,488,978	13
Customer Support (DSS)	N/A	N/A	N/A	N/A	N/A	\$148,156	\$148,156	14
General Public Education (DSS)	N/A	N/A	N/A	N/A	N/A	\$99,411	\$99,411	15
Energy Literacy (DSS)	N/A	N/A	N/A	N/A	N/A	\$111,997	\$111,997	16
Applied R&D (DSS)	N/A	N/A	N/A	N/A	N/A	\$318,770	\$318,770	17
Support Services (RA)	\$49,366	\$529,575	\$43,534	\$58,996	\$170,648	N/A	\$852,120	18
Quality Assurance	N/A	N/A	N/A	N/A	N/A	N/A	\$0	19
<b>Sub-Total Non-Incentive Program Costs</b>	<b>\$392,320</b>	<b>\$3,619,983</b>	<b>\$610,812</b>	<b>\$1,344,764</b>	<b>\$3,320,624</b>	<b>\$678,333</b>	<b>\$9,966,836</b>	<b>20</b>
<b>Total Program Costs</b>	<b>\$1,634,484</b>	<b>\$18,057,465</b>	<b>\$2,781,965</b>	<b>\$11,727,259</b>	<b>\$10,408,697</b>	<b>\$795,379</b>	<b>\$45,405,250</b>	<b>21</b>
<b>Administrative Costs</b>								
Sr. Management, Budget, Financial Oversight (RA)	\$18,607	\$163,200	\$23,771	\$38,163	\$45,940	N/A	\$289,682	22
Planning & Reporting (DSS)	N/A	N/A	N/A	N/A	N/A	\$465,975	\$465,975	23
Administration & Regulatory (DSS)	N/A	N/A	N/A	N/A	N/A	\$450,072	\$450,072	24
Public Affairs (DSS)	N/A	N/A	N/A	N/A	N/A	\$143,369	\$143,369	25
Information Technology (DSS)	N/A	N/A	N/A	N/A	N/A	\$1,380,598	\$1,380,598	26
Evaluation (DSS)	N/A	N/A	N/A	N/A	N/A	\$369,689	\$369,689	27
Direct and Indirect Overhead	\$181,323	\$1,917,866	\$303,215	\$1,111,418	\$969,424	\$353,019	\$4,836,265	28
<b>Total Administrative Costs</b>	<b>\$199,930</b>	<b>\$2,081,067</b>	<b>\$326,985</b>	<b>\$1,149,581</b>	<b>\$1,015,364</b>	<b>\$3,162,723</b>	<b>\$7,935,651</b>	<b>29</b>
<b>Total Program and Administrative Costs</b>	<b>\$1,834,414</b>	<b>\$20,138,532</b>	<b>\$3,108,951</b>	<b>\$12,876,841</b>	<b>\$11,424,061</b>	<b>\$3,958,102</b>	<b>\$53,340,901</b>	<b>30</b>
<b>Earned Compensation</b>								
Base Compensation	N/A	N/A	N/A	N/A	N/A	N/A	\$719,189	31
Performance Compensation	N/A	N/A	N/A	N/A	N/A	N/A	\$1,678,227	32
<b>Total Earned Compensation</b>							<b>\$2,397,416</b>	<b>33</b>
<b>Overall Total Costs</b>							<b>\$55,738,317</b>	<b>34</b>

Summary Metrics			
Incentive	Costs	% of Total	Row Sources
Incentive	\$28,255,610		3
Technical Assistance	\$7,182,804		9
<b>Total Incentive &amp; Technical Assistance</b>	<b>\$35,438,414</b>	<b>64%</b>	<b>10</b>
<b>Non-Incentive</b>			
Non-Incentive Program Costs	\$9,966,836		20
Administrative Costs	\$7,935,651		29
Earned Compensation	\$2,397,416		33
<b>Total Non-Incentive</b>	<b>\$20,299,903</b>	<b>36%</b>	<b>20, 29, 33</b>
<b>Overall Total</b>	<b>\$55,738,317</b>	<b>100%</b>	<b>34</b>
<b>Incentive-to-Non-Incentive Cost Ratio</b>		<b>1.7 to 1.0</b>	<b>10 / (20,29,33)</b>
<b>Program</b>			
<b>Program</b>	<b>\$45,405,250</b>	<b>81%</b>	<b>21</b>
<b>Administrative</b>	<b>\$7,935,651</b>	<b>14%</b>	<b>29</b>
<b>Earned Compensation</b>	<b>\$2,397,416</b>	<b>4%</b>	<b>33</b>
<b>Overall Total</b>	<b>\$55,738,317</b>	<b>100%</b>	<b>34</b>

## 8.4.1. Weatherization Costs and Benefits Summary

### ACT 62 and STATE GRANT WEATHERIZATION SUMMARY<sup>1</sup>

For the Period July 1, 2019 through December 31, 2020

<u>Funding Type</u>	<u>Budget</u>	<u>Actual</u>	<u>%</u>	<u>Budget</u>	<u>Actual</u>	<u>%</u>
	<u>2020</u>	<u>2020</u>		<u>2019-2020<sup>2</sup></u>	<u>2019-2020</u>	
Act 62 Weatherization	\$2,160,832	\$2,158,744	100%	\$2,250,000	\$2,247,912	100%
State Weatherization Grant	\$87,338	\$87,338	100%	\$350,000	\$350,000	100%

#### Key Results

##### Act 62 Weatherization

Homes Served	536	536
MMBtu Saved	4,354	4,354

##### State Weatherization Grant

Homes Served	89	351
MMBtu Saved	1,026	3,813

### COMBINED WEATHERIZATION SUMMARY

For the Period July 1, 2019 through December 31, 2020

<u>Funding Type</u>	<u>Budget</u>	<u>Actual</u>	<u>%</u>	<u>Budget</u>	<u>Actual</u>	<u>%</u>
	<u>2020</u>	<u>2020</u>		<u>2019-2020<sup>2</sup></u>	<u>2019-2020</u>	
Act 62 Weatherization	\$2,160,832	\$2,158,744	100%	\$2,250,000	\$2,247,912	100%
State Weatherization Grant	\$87,338	\$87,338	100%	\$350,000	\$350,000	100%
<u>TEPF Weatherization</u>	<u>\$4,223,736</u>	<u>\$3,745,796</u>	<u>89%</u>	<u>\$6,669,776</u>	<u>\$5,970,960</u>	<u>90%</u>
<b>Total Weatherization Funding</b>	<b>\$6,471,906</b>	<b>\$5,991,879</b>	<b>93%</b>	<b>\$9,269,776</b>	<b>\$8,568,872</b>	<b>92%</b>

#### Key Results

##### Homes Served

Act 62 Weatherization	536	536
State Weatherization Grant	89	351
<u>TEPF Weatherization</u>	<u>517</u>	<u>799</u>
<b>Total Homes Served</b>	<b>1,142</b>	<b>1,686</b>

##### MMBtu Saved

Act 62 Weatherization	4,354	4,354
State Weatherization Grant	1,026	3,813
<u>TEPF Weatherization</u>	<u>3,805</u>	<u>6,472</u>
<b>Total MMBtu Saved</b>	<b>9,185</b>	<b>14,639</b>

<sup>1</sup> Act 62 and State Grant funds are incremental to the base TEPF funded program and do not include the same level of administrative costs as the base TEPF program. Efficiency Vermont is leveraging the base TEPF program administrative costs to reach additional customers through the deployment of Act 62 and State Grant funds in the form of enhanced incentives, targeted outreach efforts as well as workforce development.

<sup>2</sup> The budgets and results in this report are for services provided for the period July 1, 2019 through December 31, 2020

## 8.5.1 Forward Capacity Market (FCM) Current Claims and Forecasts

	Total Portfolio of FCM Participation	Efficiency Vermont Portion of FCM Participation <sup>1</sup>	GMP EEF Portion of FCM Participation <sup>1</sup>	GMP CEED Portion of FCM Participation <sup>1</sup>
<b>Revenue Received</b>				
Revenue Received for Quarter	\$1,467,416	\$1,433,116	\$17,014	\$17,286
Revenue Received Year to Date	\$7,640,253	\$7,450,158	\$104,047	\$86,047
* Annual Revenue Estimate	\$7,633,642	\$7,480,642	\$78,000	\$75,000
% Annual Revenue Estimate Received	100.1%	99.6%	133.4%	114.7%
Revenue Received during 3-Year Period (2018 -2020)	\$29,594,177	\$28,881,437	\$394,901	\$317,559
Revenue Estimate for 3-Year Period (2018 -2020)	\$28,457,095	\$27,855,295	\$300,900	\$300,900
% 3-Year Period Revenue Estimate Received	104.0%	103.7%	131.2%	105.5%
<b>VEIC Costs</b>				
Costs for Quarter	\$58,870			
Year to Date Costs	\$208,633			
* Annual Budget Estimate	\$226,341		N/A	
Unspent Annual Budget Estimate	\$17,708			
% Annual Budget Estimate Unspent	7.8%			
<b>FCM Peak Capacity Results<sup>2</sup></b>				
FCM Summer Peak MW Performance at end of Quarter <sup>3</sup>	113.470	110.955	1.244	1.271
Annual Summer FCM Peak MW Forecast (FCM Obligation)	85.116	83.316	0.900	0.900
% Annual Summer FCM Peak MW Commitment Achieved	133.3%	133.2%	138.2%	141.2%
3-Year Summer FCM Peak MW Forecast (FCM Obligation)	85.116	83.316	0.900	0.900
% 3-Year Summer FCM Peak MW Commitment Achieved	133.3%	133.2%	138.2%	141.2%

<sup>1</sup>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.

<sup>2</sup>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](http://www.veic.org/ResourceLibrary)

<sup>3</sup> 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.

## 8.5.2 Forward Capacity Market Future Commitments and Revenue Forecast<sup>1,2</sup>

FCM Period	Delivery Dates	Summer Peak Capacity (MW)								Actual FCM Peak Capacity to Date	Revenue		
		Existing Portfolio	FCM #2-#10: Portfolio Expansions	FCM #11: Portfolio Expansion	FCM #12: Portfolio Expansion	FCM #13: Portfolio Expansion	FCM #14: Portfolio Expansion	FCM #15: Portfolio Expansion	Total Commitment <sup>7</sup>		12-Month Pmt Committed from ISO-NE	Total Actual Payments Received to Date	Revenue Rec'd Over (Under) Commitment
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		\$9,074,688	\$9,346,293	\$271,605
11	6/1/2020 - 5/31/2021	69.642	N/A	15.474					85.116	113.470	\$5,843,057	\$3,425,632	
12	6/1/2021 - 5/31/2022	77.669	N/A		25.969				103.638		\$6,220,063		
13	6/1/2022 - 5/31/2023	95.701	N/A			12.500			108.201		\$5,328,679		
14	6/1/2023 - 5/31/2024	97.708	N/A				8.500		106.208		\$2,754,272		
<b>Total:</b>											<b>\$78,471,109</b>	<b>\$60,496,377</b>	<b>-\$17,974,732</b>

### Current Financial Assurance (FA) Obligations Related to FCM Capacity Above<sup>3</sup>

	FA: Non-commercial New Capacity							Delivery FA: PFP Market <sup>6</sup>	Total Financial Assurance <sup>4</sup>	
	FCM#1-7	FCM#8-10	FCM#11	FCM#12	FCM#13	FCM#14	FCM#15			
Financial Assurance Obligation at End of This Quarter					\$76,114	\$75,157	\$21,168	\$1,661,656	\$2,293,914	
Expected Upcoming Transactions:	Fully Commercial	No new capacity obligated	Fully Commercial	Fully Commercial						
Additional FA on New Obligations					\$0	\$0	\$70,987			
FA Obligation Released (Est)					\$0	\$0	\$0			
Financial Assurance Obligation at End of Next Quarter (Estimate)					\$114,171	\$150,313	\$92,155	\$0	\$446,671	
Financial Assurance Forfeited <sup>5</sup>	\$211,623									

Proposed Commitments	New Capacity Proposed (Summer Peak MW)							
	Not Committed or Not Yet Delivered							
	FCM#1-7	FCM#8-10	FCM#11	FCM#12	FCM#13	FCM#14	FCM#15	FCM#16
Delivery Period begins:				6/1/21	6/1/22	6/1/23	6/1/24	6/1/25
Date of Auction				2/5/18	2/4/19	2/3/20	2/8/21	2/7/22
Date of Qualification Notification				9/29/17	9/28/18	9/27/19	10/2/20	10/1/21
Date of Qualification Submission				6/19/17	6/21/18	6/21/19	6/19/20	6/18/21
Date of Show of Interest				4/28/17	4/27/18	4/26/19	4/24/20	4/23/21
Additional FCM Peak Capacity Qualified to participate in upcoming auction	Delivered	No new capacity obligated	Delivered				9.800	TBD
Additional FCM Peak Capacity currently under review for Qualification				Committed	Committed	Committed		TBD
Additional FCM Peak Capacity submitted as a Show of Interest for future auction								TBD

<sup>1</sup>As of this date, we have commitments and committed pricing through FCM Auction #14. The information in this section reflects only ACTUAL committed capacity and currently committed prices for that capacity.

<sup>2</sup>Commitments include capacity from GMP EEF and CEED projects.

<sup>3</sup>Our Financial Assurance obligations are covered through cash on deposit with BlackRock.

<sup>4</sup>Includes mark-up to cover 80% credit test.

<sup>5</sup>Financial Assurance forfeited upon termination of 11.385 MW of FCM#6 obligation in Oct. 2016.

<sup>6</sup>Financial Assurance requirement related to Pay for Performance (PFP) FCM enhancement - assessed on entire portfolio. Only applicable for June, July, August, December, and January.

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