

# Reports to the 2020 General Assembly



January 15, 2020  
State of Vermont  
Agency of Administration  
Department of Buildings and General Services

Christopher Cole  
Commissioner

**Department of Buildings and General Services  
Office of the Commissioner***Agency of Administration*2 Governor Aiken Avenue  
Montpelier, VT 05633-5801[phone] 802-828-3519  
[fax] 802-828-3533

January 15, 2020

The Honorable Members of the  
2020 General Assembly  
State House  
115 State Street  
Montpelier, VT 05633

Dear Members:

A compilation of reports due to the General Assembly from the Department of Buildings and General Services can be found on our website under Commissioner's Office; Forms and Publications; Legislative Reports. You will find a list of those reports in the Table of Contents, along with reference to the legislation requiring the reports. Some of the reports were prepared working in conjunction with other Departments or Agencies.

Should you have any questions concerning these reports, please feel free to contact me at the above number or by email: [chris.cole@vermont.gov](mailto:chris.cole@vermont.gov).

Sincerely,

Christopher Cole  
Commissioner

cc: Electronic Filing – Legislative Council



## Table of Content

- TAB 1: State Energy Management Program Annual Report  
**[Act 58 of 2015 E.112(d)]**
- *Submitted on October 1, 2019*
- TAB 2: Fleet Management Services  
High Mileage Drivers Report  
**[Act 179 of 2014 E.118(a)]**

### Reports Established in Statute

- TAB 3: Transfer of Unexpended Bond Balances for Major Maintenance  
**[29 VSA § 152(a) (23)]**
- TAB 4: Property Management Revolving Fund  
**[29 VSA § 160(e)]**
- TAB 5: State Energy Management Program; Revolving Funds (SRMRF)  
**[29 VSA § 168(f)]**
- TAB 6: Capital Construction Bill  
**[32 VSA § 701a (c)(d)]**

**TAB 1 – State Energy Management Program Annual Report  
[Act 58 of 2015 E.112(d)]**

- *Submitted on October 1, 2019*

# Annual Report

## State Energy Management Program

2015 Acts and Resolves No. 58, Sec. E.112, as amended by 2019 Acts and Resolves No. 72, Sec. E.112 (d) On or before October 1 of each year commencing in 2016 and ending in 2023, the Department and EVT shall provide a joint report on the implementation of this section.

July 1, 2018 – June 30, 2019

# Table of Contents

Executive Summary .....	3
FY2019: Targets, Actions, Results .....	4
FY2020: Projected Savings, Strategies .....	6
FY2021: Projected Savings, Strategies .....	8
Observations & Recommendations .....	9
Appendices .....	10

# Executive Summary

In accordance with 2015 Acts and Resolves No. 58, Sec. E.112, the Vermont Department of Buildings and General Services (BGS) and Efficiency Vermont collaboratively developed and launched the State Energy Management Program (the Program) to accelerate, for State buildings and facilities, energy management measures, implementation of energy efficiency and conservation, and the use of renewable energy resources.

In FY2016, the first year of the Program, BGS and Efficiency Vermont executed a Memorandum of Understanding, defining the relationship, roles, and responsibilities of each organization as it pertains to the Program. BGS, with support from Efficiency Vermont, recruited, hired, and trained its Program team effectively creating the BGS Energy Office.

In FY2017, the second year of the program, BGS and Efficiency Vermont identified, developed, and implemented energy saving projects resulting in over \$150,000 of initial year savings for the State of Vermont, and over \$1.2 million in savings over the life of these measures.

In FY2018, the third year of the program, BGS and Efficiency Vermont identified, developed, and implemented energy saving projects resulting in over \$397,000 of initial year savings for the State of Vermont, and over \$3.6 million in savings over the life of these measures.

In FY2019, the final year of the preliminary period, BGS and Efficiency Vermont identified, developed, and implemented energy saving projects resulting in over \$227,000 of initial year savings for the State of Vermont, and over \$2.7 million in savings over the life of these measures.

In FY2020, the fifth year of the program, project identification, development, and completion will accelerate as targeted efforts to prioritize the worst performing buildings continue to be successful. The Program team is systematically executing energy evaluations on prioritized state-owned buildings in accordance with Section 24 Title 29: 157 VSA (a) (3). Completed evaluations have developed into successful energy savings projects while new evaluations are identifying opportunities for future energy savings projects. The Energy Office's project development process has become an integral part of BGS' standard operating procedures when evaluating overall building portfolio management needs resulting in a cohesive roadmap for continued Program success.

After a successful four-year preliminary period, the Legislature passed 2019 Acts and Resolves No. 72, that amended section E.112 of 2015 Acts and Resolves No. 58 to increase the program preliminary period from four to eight years. While the fourth year of the preliminary period was a success, the Program has experienced unforeseen staff turnover. With four more years of program funding ahead, the Program Team remains dedicated to the mission and excited to continue to help Vermont State Government lead by example.

# FY2019: Targets, Actions, Results

## Targets:

In accordance with 2015 Acts and Resolves No. 58, Sec. E.112, as amended by 2019 Acts and Resolves No. 72, Sec. E.112, BGS and Efficiency Vermont aimed to reduce the State's total energy usage and related costs by an amount not less than \$150,000 through measures implemented as part of the Program.

## Actions:

- BGS and Efficiency Vermont are implementing the Program Process, including:
  - Project identification, development, management and completion procedures
  - Hand-off points during the execution of projects
  - Documentation, tracking and reporting schedule and protocols
- Program representatives from each organization continue to meet bi-weekly for collaborative project identification, development, and management. A whole team meeting occurs quarterly to communicate specific program and project needs and to evaluate program success.
- Energy Star Portfolio Manager® (“ESPM”) is serving as a functioning building energy accounting system that includes baseline and annual energy data. The Program Team utilizes ESPM to analyze building energy consumption data and develop prioritized building lists based on building performance metrics. Through coordinated efforts with the Agency of Administration Office of Finance, ESPM is now being updated on a monthly basis, allowing the Program Team access to the most current building energy data available.
- BGS, with support from Efficiency Vermont, secured the services of two consistent and professional energy auditing firms to perform ASHRAE Level 2 energy audits for state owned and operated buildings. BGS was mandated to audit 10% of its building square footage annually until the statute was recently amended to require 20%. In FY2019 the Program Team successfully audited over 372,000 square feet of building space, equal to 11% of BGS's total space. The prioritized lists of buildings that have received energy audits and those buildings that are scheduled to receive energy audits are included in the Appendices.
- BGS and Efficiency Vermont, with support from Burlington Electric Department, identified, developed, and completed energy saving projects; as shown in the tables below.

FY2019 Results:

Site	Project Focus	KWH	MMBTU	First-year \$ Savings	Lifetime \$ Savings
Numerous locations	Efficiency VT Prescriptive Projects			\$2,381	
Numerous locations	Solar Net Metering			\$67,910	
12 Baldwin St.	Insulation & Air-sealing	466	93	\$1,856	\$55,681
Windsor District Court Parking Lot Lighting	LED Upgrades	5,738		\$918	\$11,016
ANR Vermont Fish Culture Energy	LED lighting, VFD's, Pumps	226,500	440	\$36,081	\$432,971
Middlebury Mahady Courthouse	LED lighting with integrated HVAC controls	165,951	335	\$36,071	\$544,065
Derby Public Safety	LED lighting, fan & pump VFD's, controls	83,262	2,699	\$18,208	\$364,160
Williston Info Center NB	LED lighting, Exhaust fan VFD with VOC sensors	37,783	226	\$6,505	\$130,102
50 Cherry St.	LED Lighting, VFD's, Controls	81,622	439	\$16,638	\$249,570
Rutland Asa Bloomer	Controls, ERV's, High efficiency pumps	120,475	695	\$31,205	\$780,125
AOT Central Garage	LED Lighting			\$9,710	\$145,650
<b>Totals</b>		<b>721,797</b>	<b>4,927</b>	<b>\$227,482</b>	<b>\$2,713,341</b>

# FY2020: Projected Savings, Strategies

## Targets:

In accordance with 2015 Acts and Resolves No. 58, Sec. E.112, as amended by 2019 Acts and Resolves No. 72, Sec. E.112, BGS and Efficiency Vermont aim to reduce the State's total energy usage and related costs in FY2012 by an amount not less than \$150,000 through measures implemented as part of the Program.

With the original Program preliminary period now complete, BGS and Efficiency Vermont anticipate a continued trend of accelerated performance resulting in energy savings that exceed targets through the project implementation process.

## Projected Savings:

Energy type	KWH	MMBTU	\$ Savings
Electricity	795,755		\$180,336
Thermal Fuels		8,592	
Solar Photovoltaic Net-Metering	5,958,464		\$67,476
<b>Totals</b>	<b>6,754,219</b>	<b>8,592</b>	<b>\$247,812</b>

A detailed list of planned FY2020 activities can be found in the Appendices.

## Strategies:

Collaborative and systematic project identification, development, and management is vital to the success of the Program. To ensure this process continues to be efficient and effective, BGS and Efficiency Vermont will evaluate the success of the following strategies and modify as necessary.

### *Consistent, Collaborative Communication*

- The Program team shall adhere to the project identification, development, and management procedures defined in the MOU.
- The Program team, with representatives from each organization, shall continue to participate in bi-weekly meetings for ongoing collaborative project identification, development, and management and coordinate full Program Team meetings on a quarterly basis.

### *Adequate Staffing*

- Efficiency Vermont shall dedicate staff resources totaling a minimum of one (1) Full Time Employee (FTE) to support collaboration and project completion with BGS for the duration of the Program.
- BGS shall maintain a staff team, supported by Efficiency Vermont, dedicated to Program implementation for Project Management and Program Support. These positions shall be in addition to BGS' State Energy Program Manager.

*Collaborative Project Identification, Development, Management, and Completion:*

- The Program team shall continue conducting energy audits on state-owned buildings, following the procedures developed by BGS with the support of Efficiency Vermont.
- With Technical Assistance from Efficiency Vermont as needed, BGS' Energy Project Managers finalize each project's scope of work and procure resources for implementation.
- Upon request, Efficiency Vermont assists BGS in assessing the need for commissioning or tuning of newly installed equipment.

*Energy Tracking:*

In accordance with 2015 Acts and Resolves No. 58, Sec. E.112, as amended by 2019 Acts and Resolves No. 72, Sec. E.112, BGS will continue to make improvements toward systems of measurement to achieve the goals of 2011 Acts and Resolves No. 40.

- Using Energy Star Portfolio Manager®, BGS will maintain an energy accounting system that includes baseline and annual data on energy consumption at properties owned or managed by BGS. BGS has requested that all state agencies who own and operate buildings utilize ESPM for these purposes.
- With respect to transportation, Administrative Bulletin 2.3 Appendix B: Fuel Card Use – State Owned Vehicles, effective February 2, 2016, established the requirements of the statewide universal fuel card program to provide State agencies and departments with a vehicle and/or equipment fuel card that allows State employees to purchase fuel and other vehicle related supplies and services for State vehicles and/or State-owned fuel-powered equipment in order to conduct governmental business. BGS is now able to capture state employee fuel purchases through the WEX Fleet Purchase Card reporting system.
- Additionally, BGS recommends that the State of Vermont move toward a centralized energy data tracking and reporting system that encompasses all state government energy consumption data. This system should be provided by a third-party entity and administered with support from the service provider. The tracking system should provide a utility billing audit function. Currently, utility bills are paid by several different state entities. Inconsistencies in billing are not tracked and reported as regularly as they occur. Utility bill auditing can help find and fix issues relating to unusual billing period lengths, cost duplication, gaps in billing dates, frequently estimated bills, use or cost that exceeds the norm, significant variance from historical patterns for use, cost, or demand, meter reading issues, rate schedule issues, and actual vs. budget differences.

# FY2021: Projected Savings, Strategies

## Targets:

In accordance with 2015 Acts and Resolves No. 58, Sec. E.112, as amended by 2019 Acts and Resolves No. 72, Sec. E.112, BGS and Efficiency Vermont will continue to reduce the State's total energy usage and related costs of the Program by an amount not less than \$150,000 annually.

Projected Savings from projects currently in the project pipeline.

<b>Energy type</b>	<b>KWH</b>	<b>MMBTU</b>	<b>\$ savings</b>
Additional Projects resulting from Energy Audits	1,301,344	14,675	\$249,136
Solar Photovoltaic Net-Metering	5,500,000		\$55,356
<b>Totals</b>	<b>6,801,344</b>	<b>14,675</b>	<b>\$304,492</b>

## Strategies:

Ongoing, collaborative, and systematic project identification, development, and management will remain critical to the long-term success of the Program. BGS and Efficiency Vermont will continue to execute the strategies as noted in the Memorandum of Understanding, making modifications and improvements as needed.

In accordance with 2015 Acts and Resolves No. 58, Sec. E.112, as amended by 2019 Acts and Resolves No. 72, Sec. E.112, BGS will continue to make improvements toward systems of measurement to achieve the goals of 2011 Acts and Resolves No. 40.

# Observations & Recommendations

BGS and Efficiency Vermont, through the development, launch, and implementation of the State Energy Management Program, have successfully achieved \$227,481 of annual energy savings and \$2,713,341 of lifetime savings for projects implemented in FY2019. With a full staff onboard, our organizations are confident that the Program will continue to produce more than the required annual savings, and significant lifetime savings, for the State of Vermont.

In FY2019 the State of Vermont received \$341,438 from Efficiency Vermont to support the building project manager position and two four-year limited service or consulting positions established in the 2015 ACT 58 Sec. E.100(a)(2), and related supervision and overhead, as BGS and Efficiency Vermont consider necessary to meet the Program goals.

Efficiency Vermont

By: Rebecca Foster  
Name: Rebecca Foster  
Title: Director

State of Vermont  
Department of Buildings and General Services

By: Chris Cole  
Name: Christopher Cole  
Title: Commissioner

# Appendices

## FY2020 Detailed Project List:

Site	Project Focus	kWh	MMBTU	\$ Savings
St. Johnsbury Caledonia Courthouse	Lighting/Air-sealing/Controls	137,542	7,877	\$38,021
Rutland Courthouse and Office	Lighting/HVAC/Controls	187,920	400	\$34,501
Brattleboro Courthouse	Lighting/Insulation	14,430	268	\$25,979
Newport State Office Building	Lighting Upgrade	85,217		\$17,417
2 & 4 Aiken	Window Replacement	1,340		\$1,100
Bennington Welcome Center	LED Lighting, Controls	30008	4.2136	\$4,557.00
Bennington Bennco	LED Lighting, Controls	20482	41.4032	\$3,651.00
Rutland Parking Garage	LED Lighting	333,615		\$47,057
Barre Courthouse Lighting	LED Lighting	70,418		\$17,895
<b>Totals</b>		<b>795,755</b>	<b>8,592</b>	<b>\$190,178</b>

## Future Projects Under Development from Completed Energy Audits:

Site	kWh	MMBTU	\$ Savings
Bennington District Court/Office (6080)	60,122		\$3,802
Brattleboro State Office Bldg (6160)	29,218		\$5,751
Burlington Zampieri Office Bldg (6174)	530,678	256	\$74,227
Fair Haven Welcome Center (9250)	9,977	33	\$1,985
Guilford Southeast Welcome Center (9734)	12,980	30	\$2,346
Montpelier 2 Governor Aiken Ave	7,761		\$1,507
Montpelier 4 Governor Aiken Ave (6002)	5,844		\$743
New Haven Public Safety - CAMPUS	22,250	61	\$4,349
Pittsford Admin Building (6288)	6,441	1	\$1,290
Pittsford Firehouse (6272)	5,565	271	\$4,906
Pittsford Warehouse (Behind Firehouse) (6284)	396	48	\$859
Royalton Troop HQ - CAMPUS	5,087	65	\$1,681
Rutland McKinley Ave - COMPLEX	14,213	17	\$2,452
Rutland Motor Vehicles (6307)	6,374	36	\$1,380
St. Albans District Courthouse (6321)	22,690	367	\$7,471
St. Johnsbury State Office Building (6340)	12,925	58	\$2,727
Montpelier 115 State St and Annex (6018)	93,403	12,399	\$12,399
Montpelier 120 State St (6020)	133,331	1,032	\$26,612
Montpelier 133 State St (6025)	48,712		\$51,770
Montpelier 109 State St and Connector (6014)	273,377	718	\$40,879
<b>Totals</b>	<b>1,301,344</b>	<b>14,675</b>	<b>\$249,136</b>

Future Scheduled Energy Audits:

<b>Property Name</b>	<b>Property GFA - Self-Reported (ft<sup>2</sup>)</b>
Montpelier 1 Baldwin St (6003)	7,952
Montpelier 10 Taylor St Shop and Storage (6013)	2,450
Montpelier 110 State St (6015)	14,910
Montpelier 112 State St (6011)	22,349
Montpelier 116 State St (6019)	22,788
Montpelier 118 State St (6030)	5,327
Montpelier 122 State St Boiler Plant (6021)	5,276
Montpelier 126 State St (6022)	7,375
Montpelier 128 State St (6023)	9,250
Montpelier 132 State St and Shop (6024+6034)	4,746
Montpelier 134 State St (6026)	3,048
Montpelier 136 State St (6027)	5,133
Montpelier 6 Baldwin St (6004)	24,186
Montpelier 111 State St (6016)	46,672
Bradford Rest Area (9707)	6,861
<b>Totals</b>	<b>188,323</b>

BGS, with support from Efficiency Vermont, developed this prioritized-buildings list using two primary criteria; Energy Cost Intensity (ECI, measured in \$/ft<sup>2</sup>) and Site Energy Use Intensity (EUI, measured in kBtu/ft<sup>2</sup>). ECI shows how much BGS spends in electricity and fuel per building per ft<sup>2</sup>. Site EUI measures how much electricity and fuel a building consumes per ft<sup>2</sup>.

The Program team ranks buildings by each primary criterion independently, from best to worst performing building. The team then averages the two criteria-based lists for each year. The final step in creating the prioritized list above is to average the years together to determine the best and worst performing buildings over the past four years.

**TAB 2 – Fleet Management Services  
High Mileage Drivers Report  
[Act 179 of 2014 E.118(a)]**

## FY 2019 HIGH MILEAGE USERS REPORT

### Background

As a part of the Fleet Management Services (FMS) program, BGS conducts a review of the mileage reimbursement records of all departments at the end of each fiscal year to identify high mileage drivers. The following is a summary of the FY 2019 review:

Number of Employees Reimbursed for Mileage at the Full Rate	3,318
Total Miles Reimbursed at Full Rate	4,609,698
Total Cost to State	\$2,582,869
Number of Employees Reimbursed More Than 11,000 Miles at Full Rate (High Mileage Users)	58
Total Miles Reimbursed by the 56 Employees	861,621
• Average Miles Driven per Employee	14,856
Total Cost to State	\$483,080
• Average Reimbursement Per Employee	\$8,329

Following this review, departments are contacted to inform them of their high mileage drivers, and to advise them of potential savings which may be available by shifting employees with high mileage reimbursements to an FMS vehicle.

### Mileage Breakeven Point

The mileage breakeven is the point at which it becomes more cost effective to utilize a fleet vehicle versus reimbursing an employee for driving their private vehicle at the full mileage reimbursement rate. The breakeven point in FY 2019 was 11,000 miles. For travel greater than 11,000 miles, driving a fleet vehicle saves the State money. It should be noted that the cost analysis is based on using the most economical current model compact sedan available through State contract and current fuel prices.

The following chart details the number of State employees, by department, during fiscal year 2019, who exceeded the 11,000-mile breakeven point:

**State Employees Reimbursed > 11,000 Miles (Breakeven Point)**

<b>Department</b>	<b># of Employees</b>	<b>Total Miles</b>	<b>Total Amt Reimbursed</b>
Transportation Agency	15	236,119	\$ 131,780
Judiciary	12	195,196	\$ 109,710
Disabilities, Aging Ind. Living Labor	8	121,600	\$ 68,056
Financial Regulation	6	93,566	\$ 52,491
Public Safety	6	80,210	\$ 45,084
Education Agency	3	33,512	\$ 18,932
Corrections	2	22,944	\$ 12,911
Tax	2	25,475	\$ 14,278
Environmental Conservation	2	24,458	\$ 13,713
Senate Secretary's Office	1	12,125	\$ 6,763
	1	16,416	\$ 9,362
<b>Total</b>	<b>58</b>	<b>861,621</b>	<b>\$ 483,080</b>

**Mileage Reimbursement History**

**Full-Rate Mileage Reimbursements by Fiscal Year**

<b>Fiscal Year</b>	<b>Miles</b>	<b>Cost</b>
2019	4,609,698	\$2,582,869
2018	4,961,551	\$2,676,310
2017	5,274,338	\$2,839,477
2016	5,995,580	\$3,363,566
2015	7,238,704	\$3,998,988
2014	8,979,161	\$5,056,228
2013	9,532,836	\$5,327,112
2012	9,337,519	\$4,812,554

**TAB 3 – Capitol Construction Act Funds**  
**[29 V.S.A. § 152(a) (23)]**

**TRANSFER OF UNEXPENDED BOND BALANCES FOR MAJOR MAINTENANCE  
29 V.S.A. 152(a)(23)**

**On or before January 15 of each year, the Commissioner shall report to the House Committee on Corrections and Institutions and the Senate Committee on Institutions regarding all transfer and expenditures made pursuant to this subdivision (23).**

In accordance with the requirements of 29 V.S.A. 152(a)(23) pertaining to the Transfer of Unexpended Bond Balances for Major Maintenance, the Commissioner of Buildings and General Services reports no funds were transferred and expended from unspent balances during FY2019.

**TAB 4 – Property Management Revolving Funds**  
**[29 V.S.A. § 160(e)]**

**PROPERTY MANAGEMENT REVOLVING FUND – 29 V.S.A. § 160 (e)**

(e) The Commissioner of Buildings and General Services shall supervise the receipt and expenditure of monies comprising the Property Management Revolving Fund, subject to the provisions in this section. He or she shall maintain accurate and complete records of all such receipts and expenditures and shall make an annual report on the condition of the Fund to the House Committee on Corrections and Institutions and the Senate Committee on Institutions. All balances remaining at the end of a fiscal year shall be carried over to the following year.

**Fund Overview – Property Management**

The Property Management program began FY2019 with a negative fund balance of \$24.9M. As shown below, the fund has been reduced by \$706,749.

The calendar year 2017 was the last year for the Principal and Interest payments for the “Property Management Treasurer Buildings.” Therefore, the Asa Bloomer building in Rutland and 108 Cherry Street in Burlington are now paid off. Going forward, the negative fund balance created by these buildings will be slowly eliminated, reducing the property management deficit.

The FY19 total cost of leases was \$16,227,539.13.

The Fund Balance at the end of FY2019 was **(\$24.9±M)** based on the following revenues and expenses.

Revenues	\$22,109,589
Cost of Goods Sold	(\$17,684,510)
Operating Expenses	<u>( \$3,718,329)</u>
Net Income	\$ 706,749
Fund Balance 6/30/2018	(\$24,895,700)
Fund Balance 6/30/2019	(\$24,188.951)

**TAB 5 – State Energy Management Program; Revolving Funds (SRMRF)**  
**[29 V.S.A. § 168(f)]**

**Title:** Report to the Senate Committee on Institutions and the House Committee on Corrections and Institutions on the expenditure of funds from the State Energy Management Program revolving funds.

**Date:** January 15, 2020

In accordance with Act 178 of 2014, Section 41. 29 V.S.A. § 168, State Energy Management Program; Revolving Funds, (f) Beginning on or before January 15, 2015 and annually thereafter, the Department of Buildings and General Services shall report to the Senate Committee on Institutions and the House Committee on Corrections and Institutions on the expenditure of funds from the State Resource Management Revolving Fund for resource conservation measures and the State Energy Revolving Fund for energy efficiency improvements and the use of renewable resources. For each fiscal year, the report shall include a summary of each project receiving funding and the State's expected savings

### **State Resource Management Revolving Fund (SRMRF) Project Summary**

State government has invested \$2,350,935.18 from the SRMRF in energy projects that have resulted in over \$2,382,181.28 in avoided energy costs to date. The SRMRF currently has \$317,634 available for funding future resource conservation projects.

In total, fifty (50) projects have received funding through the SRMRF. Of these:

- Forty-five (45) projects have been completed,

Five (5) projects were approved for funding in 2019 as outlined below:

- The Department of Buildings and General Services is participating in Green Mountain Power's (GMP) Flexible Load Management Pilot program to help reduce peak electricity demand at Waterbury State Office Building in Waterbury, VT.

This project is estimated to cost \$2,166.75 and will save an estimated \$1,590.00 annually in energy costs.

- The Department of Buildings and General Services is replacing existing fluorescent light fixtures with new LED lights at the Newport Emory Hebard State Office Building.

This project is estimated to cost \$171,000 and will save an estimated \$17,417 annually in electricity costs, 291 million British thermal units (MMBTU) annually, and 37.9 metric tons of carbon dioxide equivalent greenhouse gas emissions (MTCO<sub>2e</sub>) annually.

- The Department of Buildings and General Services is replacing existing T-8 light fixtures with T-LED lights at the White River Junction Courthouse.

This project cost \$1,000 and will save an estimated \$1,535 annually in electricity costs, 37 MMBTU annually, and 4.8 MTCO<sub>2e</sub> annually.

- The Department of Buildings and General Services is replacing existing lighting with LEDs and lighting controls, implementing weatherization and air sealing improvements, and adjusting the Building HVAC schedule at the Brattleboro Courthouse.

This project is estimated to cost \$140,000 and will save an estimated \$14,000 annually in electricity costs, 140 MMBTU annually, and 18 MTCO<sub>2e</sub> annually.

- The Department of Buildings and General Services partnered with the Agency of Transportation to install LED lights at the Central Garage in Berlin.

This project cost \$71,640 and will save an estimated \$9,710 annually in electricity costs, 174 MMBTU annually, and 22.7 MTCO<sub>2e</sub> annually.

These projects have conserved over 131,891 MMBTU of energy and reduced roughly 11,541 metric tons of carbon dioxide equivalent greenhouse gas emissions.

### **State Energy Revolving Fund (SERF) Project Summary**

State government has invested \$2,346,462.24 from the SERF in energy projects that have resulted in over \$576,943.04 in avoided energy costs to date. A credit facility of up to \$8 million may be established at the Treasurer's discretion of which \$5,178,150.19 is available for approval to fund additional energy projects.

In total, eleven (11) projects have received funding through the SERF. Of these:

- Seven (7) projects have been completed.

Four (4) projects were approved for funding in 2019 as outlined below:

- The Department of Buildings and General Services will replace existing lighting with LED lighting upgrades and controls, make upgrades to pumps and Variable Air Volume (VAV) equipment, and install weatherstripping at doors and insulation improvements in the attic at the Caledonia County Courthouse in St. Johnsbury.

This project is estimated to cost \$179,693 and will save an estimated \$38,020 annually in electricity, maintenance, and heating/cooling costs, 1,650 MMBTU annually, and 150 MTCO<sub>2e</sub> annually.

- The Department of Buildings and General Services is installing a state-of-the-art LED lighting and controls system, adding smart pumps on the hot water and chilled water supply loop to replace the aging pumps and implementing building weatherization in specific locations at the Mahady Courthouse in Middlebury.

This project cost \$220,550 and will save an estimated \$36,071 annually in electricity, maintenance and heating/cooling costs, 901.2 MMBTU annually, and 98.7 MTCO<sub>2e</sub> annually.

- The Department of Buildings and General Services upgraded the Building Automation System (BAS) Controls, replaced the rooftop energy recovery units, replaced the boilers and replaced the circulator pumps with new smart pumps at the Asa Bloomer State Office Building located in Downtown Rutland.

This project is estimated to cost \$323,653.96 and will save an estimated \$46,950.04 annually in electricity and heating/cooling costs, 1,045.74 MMBTU annually, and 107.09 MTCO<sub>2e</sub> annually.

- The Department of Building and General Services is installing state-of-the-art LED lighting and lighting controls systems at the District Courthouse in Barre and the Multi-Modal Transit Center Parking Garage in Rutland.

These projects will cost \$432,250 and will save an estimated \$64,956.83 in fuel and electricity costs annually, 1,536 MMBTU annually, and 179.7 MTCO<sub>2e</sub> annually.

These projects have helped to conserve over 10,612.16 MMBTU of energy and reduce roughly 1,278.12 metric tons of carbon dioxide equivalent greenhouse gas emissions.

The Department of Buildings and General Services Energy Office administers the State Energy Management Program (SEMP). The Energy Office is involved in multiple on-going initiatives that contribute to the reduction of greenhouse gas emissions associated with State Government operations. These initiatives span beyond the expenditure of funds from the SERF and SRMRF detailed in this report. In accordance with [ACT 58 \(2015\) Sec. E.112 \(d\)](#), on or before October 1 of each year, a comprehensive SEMP Annual Report is submitted to the House Committee on Corrections and Institutions, the Senate Committee on Institutions, the House and Senate Committees on Natural Resources and Energy, the House and Senate Committees on Appropriations, the Secretary of Administration, and the Joint Fiscal Office.

The 2019 SEMP annual report can be found here:

[https://legislature.vermont.gov/assets/Legislative-Reports/SEMP-Annual-Report-FY2019\\_Executed.pdf](https://legislature.vermont.gov/assets/Legislative-Reports/SEMP-Annual-Report-FY2019_Executed.pdf)

**TAB 6 – Capital Construction Bill**  
**[32 V.S.A. § 701a (c)(d)]**

**Capital Construction Bill 32 V.S.A. § 701a (c)(d)**

(c) The spending authority authorized by a capital construction act shall carry forward until expended, unless otherwise provided. All unexpended funds remaining for projects authorized by capital construction acts enacted in a legislative session that was two or more years prior to the current legislative session shall be reported to the General Assembly and may be reallocated in future capital construction acts.

(d) On or before January 15, each entity to which spending authority has been authorized by a capital construction act enacted in a legislative session that was two or more years prior to the current legislative session shall submit to the House Committee on Corrections and Institutions and the Senate Committee on Institutions a report on the current fund balances of each authorized project with unexpended funds.

PROJECT	APPROPRIATION PER ACT	PROJECT BUDGET	AMOUNT EXPENDED	ENCUMBRANCE AMOUNT	PROJECT BALANCE
ACTS OF 2009					
Property Transactions/Marketing Expenses	\$0.00	\$43,364.00	\$33,960.49	\$0.00	\$0.00
ACTS OF 2012					
Vermont Veterans' Home Mold Phase II	\$0.00	\$354,439.00	\$321,920.28		\$32,518.72
ACTS OF 2013					
Renovation and replacement of Vermont State Hospital, related projects	\$8,700,000.00	\$8,700,000.00	\$7,660,630.58	\$7,276.51	\$1,032,092.91
Statewide Major Maintenance		\$3,659,907.36	\$3,592,373.58	\$67,533.78	\$0.00
ACTS OF 2014					
Statewide Major Maintenance	\$8,369,994.00	\$5,629,042.39	\$5,496,774.27	\$132,268.12	\$0.00
Waterbury State Office Complex restoration & project costs	\$33,000,000.00	\$33,186,262.00	\$33,184,246.00	\$2,016.00	
Secure Residential facility, siting & Design	\$50,000.00	\$50,000.00	\$43,200.35	\$0.00	\$6,793.58
Major Maintenance at Historic Sites Statewide	\$200,000.00	\$199,348.00	\$198,348.00	\$1,000.00	\$0.00
Veterans' Home Kitchen Remodel-Federal Fund Match	\$435,000.00	\$433,582.00	\$412,088.41		\$21,493.59
ACTS OF 2015					
Agency of Agriculture and ANR design construction documents/permitting	\$2,500,000.00	\$2,500,000.00	\$2,215,460.53	\$284,539.47	\$0.00
Statewide Major Maintenance	\$8,210,287.00	\$798,210.39	\$798,210.39	\$0.00	\$197,859.00
Middlesex State Archives Renovations	\$660,000.00	\$660,000.00	\$525,624.21	\$61,210.00	\$59,537.54
WRJ, Windsor Court design/planning/mechanical/security/energy upgrades	\$300,000.00	\$300,000.00	\$48,269.37	\$222,336.77	\$29,393.86
WSOC Insurance Funds		\$15,733,460.22	\$15,714,654.76	\$18,805.46	\$0.00
Bennington Monument Elevator, Roof Repairs		\$115,408.17	\$112,393.17	\$796.44	\$2,218.56
ACTS OF 2016					
Statewide Major Maintenance	\$8,300,000.00	\$4,466,795.84	\$4,327,263.32	\$101,804.41	\$37,728.11
Engineering Design for State House Generator		\$150,000.00	\$139,363.47	\$10,636.53	\$0.00
Facility and Energy Assessments		\$76,660.33	\$60,493.12	\$16,167.21	\$0.00
Lifesafety Infrastructure Improvements at 120 State St	\$1,500,000.00	\$1,500,000.00	\$1,021,668.51	\$478,331.49	\$0.00
SSCF Steamline Replacement Phase 1 & design/cost Phase 2	\$200,000.00	\$200,000.00	\$48,118.37	\$151,881.63	\$0.00
Southern State Correction copper waterline replacement	\$1,100,000.00	\$1,062,271.89	\$959,528.47	\$102,743.42	\$0.00
Waterbury State Office Complex restoration & project costs	\$2,000,000.00	\$2,000,000.00	\$1,968,222.41	\$22,777.59	\$9,000.00
108 Cherry St Garage & Structural Audit	\$300,000.00	\$300,000.00	\$42,931.55	\$257,068.45	\$0.00
Pittsford Training Center Electrical Upgrades	\$500,000.00	\$222,331.91	\$63,721.76	\$0.00	\$158,610.15
Statewide ADA Projects	\$74,000.00	\$74,000.00	\$21,539.70	\$52,460.30	\$0.00
11 & 13 Green Mountain Drive Planning and siting for DLC	\$75,000.00	\$75,000.00	\$0.00	\$0.00	\$75,000.00
Generator Upgrade		\$150,000.00	\$139,636.47	\$10,636.53	\$0.00
Corrections, Perimeter Intrusion	\$100,000.00	\$99,089.50	\$34,792.95		\$64,296.55
Historic Sites Major Maintenance	\$200,000.00	\$198,178.40	\$190,928.40	\$7,250.00	\$0.00
Westminster, DPS Facility project cost adjustment for site conditions	\$400,000.00	\$396,357.00	\$390,291.70	\$0.00	\$6,065.30
Roxbury Fish Hatchery reconstruction Project	\$2,230,000.00	\$2,209,692.00	\$1,996,986.67	\$212,705.33	\$0.00
ACTS OF 2017					
Statewide, planning, use and contingency	\$500,000.00	\$482,796.92	\$257,843.49	\$224,953.43	\$0.00
Statewide Major Maintenance	\$6,000,000.00	\$6,052,995.68	\$5,616,457.87	\$434,620.66	\$1,917.15
Statewide, BGS engineering and architectural project costs	\$3,537,525.00	\$812,504.00	\$808,287.38	\$0.00	\$4,216.62
Statewide, physical security enhancements	\$270,000.00	\$270,000.00	\$195,604.54	\$5,551.01	\$68,844.45
Randolph, Agency of Agriculture, Food and Markets and of Natural Resources, collaborative laboratory, construction	\$4,500,000.00	\$4,500,000.00	\$4,499,880.00	\$0.00	\$120.00
Springfield SSCF completion of the steamline replacement	\$300,000.00	\$300,000.00	\$8,992.40	\$0.00	\$291,007.60

Newport NSCF, door control replacement	\$1,000,000.00	\$1,000,000.00	\$568,068.03	\$431,931.97	\$0.00
Montpelier, 109 and 111 State Street Design	\$600,000.00	\$390,350.92	\$241,442.53	\$13,896.30	\$135,012.09
Burlington, 108 Cherry St, parking garage, repairs	\$5,000,000.00	\$2,131,094.00	\$0.00	\$428,620.00	\$1,702,474.00
Generator Upgrade	\$138,945.08	\$199,649.08	\$175,243.48	\$2,961.00	\$21,444.60
Major Maintenance at Historic Sites Statewide	\$200,000.00	\$197,410.00	\$195,910.00	\$0.00	\$1,500.00
Human Services Grant Program	\$100,000.00	\$100,000.00	\$88,850.00	\$0.00	\$11,150.00
Roxbury Fish Hatchery reconstruction Project	\$2,720,000.00	\$2,684,779.00	\$1,638,222.12	\$820,941.69	\$225,615.19
Williston Public Safety Field Station site acquisition, design, permitting & construction documents	\$1,927,000.00	\$1,902,047.00	\$1,627,027.70	\$275,019.30	\$0.00
Vermont Veteran's Home kitchen renovations and mold remediation	\$300,000.00	\$296,115.00	\$84,716.30	\$1,864.80	\$209,533.90
ACTS OF 2018					
Statewide, planning, use and contingency	\$600,000.00	\$566,765.58	\$99,842.69	\$150,000.00	\$316,922.89
Statewide Major Maintenance	\$6,900,000.00	\$6,855,889.00	\$4,530,805.28	\$1,477,074.11	\$848,009.61
Statewide, physical security enhancements	\$270,000.00	\$270,000.00	\$0.00	\$0.00	\$270,000.00
Montpelier State house, Dome, Drum & Ceres, design, permitting, construction, restoration, renovation and lighting	\$1,700,000.00	\$1,700,000.00	\$1,682,527.29	\$0.00	\$17,472.71
Montpelier 120 State St, life safety and infrastructure improvements	\$1,968,000.00	\$1,968,000.00	\$1,956,299.96	\$11,029.71	\$670.33
Randolph, Agency of Agriculture, Food and Markets and of Natural Resources, collaborative laboratory, construction	\$3,944,000.00	\$3,944,000.00	\$3,468,596.32	\$475,000.00	\$403.68
Waterbury, WSOC Weeks building renovation and fit up	\$1,152,085.00	\$1,152,085.00	\$725,128.65	\$27,472.80	\$399,483.55
Newport, Northern State Correctional Facility, doore control replacement & perimeter control	\$1,715,000.00	\$1,715,000.00	\$1,002,382.63	\$25,136.87	\$687,480.50
Montpelier, 109 & 111 State St, final design & construction	\$1,000,000.00	\$790,443.29	\$3,710.00	\$0.00	\$786,733.29
Montpelier, 133 State St, renovations of mainframe workspace to Office Space (ADS)	\$700,000.00	\$700,000.00	\$0.00	\$76,714.00	\$623,286.00
Montpelier, 115 State St State House, switchgear and emergency Generator	\$450,000.00	\$450,000.00	\$282,163.30	\$167,836.70	\$0.00
Rutland, ASA Bloomer building, rehabilitation of building and components and systems, and planning and use study	\$1,050,000.00	\$1,050,000.00	\$745,735.13	\$254,158.62	\$50,106.25
Springfield, State Office Building, repair of the retaining wall, and environmental remediation associated with retaining wall project	\$1,400,000.00	\$1,400,000.00	\$1,959.87	\$48,628.93	\$1,349,411.20
St. Albans, Frankly County Courthouse, ADA renovations, new handicap access ramp and related exterior renovations	\$300,000.00	\$300,000.00	\$0.00	\$0.00	\$300,000.00
Waterbury, WSOC , Stanley & Wasson, demolition of Stanley Hall and programming, schematic design and design development for Wasson Hall	\$950,000.00	\$950,000.00	\$26,210.94	\$48,355.06	\$875,434.00
Rutland, MVRCF, repair of the historic brick and stone masonry wall used as the perimeter security for the facility	\$600,000.00	\$759,021.94	\$681,842.94	\$70,633.00	\$6,546.00
Statewide Correctional Facilities cameras, locks & perimeter intrusion	\$300,000.00	\$299,484.00	\$186,609.56	\$0.00	\$112,874.44
Chittenden County Regional Correctional Facility and Northwest State Correctional Facility, renovations, beds for therapeutic placement	\$600,000.00	\$598,967.00	\$3,296.88	\$20,312.00	\$575,358.12
Essex, Woodside Juvenile Rehabilitation Center, design and construction documents	\$500,000.00	\$499,139.00	\$0.00	\$0.00	\$499,139.00
Battleboro, Battleboro Retreat, renovation & fit-up	\$4,500,000.00	\$4,492,254.00	\$1,990,611.77	\$2,501,642.23	\$0.00
Major Maintenance at Historic Sites Statewide	\$300,000.00	\$299,484.00	\$256,916.51	\$8,046.20	\$34,521.29
Construction of the Williston Public Safety Field Station	\$5,573,000.00	5,563,407.00	\$701.04	\$739,798.00	\$4,822,907.96
East Cottage, Robert H. Wood Criminal Justice & Fire Training Center, renovation and Fit-up and historic windows	\$1,850,000.00	\$1,846,815.00	\$105,097.12	\$91,550.00	\$1,650,167.88
Berlin, scoping and preliminary design for the Berlin Public Safety Field Station	\$35,000.00	\$34,940.00	\$23,013.50	\$0.00	\$11,926.50

ACTS OF 2019					
Statewide, planning, use and contingency	\$700,000.00	\$700,000.00	\$0.00	\$0.00	\$700,000.00
Statewide Major Maintenance	\$6,500,000.00	\$6,258,502.00	\$0.00	\$0.00	\$6,258,502.00
Statewide, BGS engineering and architectural project costs	\$3,583,423.00	\$880,486.00	\$0.00	\$0.00	\$880,486.00
Statewide, physical security enhancements	\$275,000.00	\$275,000.00	\$0.00	\$0.00	\$275,000.00
108 Cherry St Parking Garage Repairs	\$3,000,000.00	\$3,000,000.00	\$0.00	\$0.00	\$3,000,000.00
120 State St Stair Towers and rear entry	\$3,500,000.00	\$3,500,000.00	\$557,169.66	\$1,631,268.42	\$1,311,561.92
State House New carpeting or repair of carpeting near the Governors Ceremonial office, the Cedar Creek Room and the Card Room.	\$45,000.00	\$45,000.00	\$0.00	\$0.00	\$45,000.00
Montpelier DOL Facilities, modernization project	\$120,000.00	\$120,000.00	\$0.00	\$2,400.00	\$117,600.00
Northeast State Correctional Facility, direct digital HVAC control system replacement	\$900,000.00	\$900,000.00	\$0.00	\$0.00	\$900,000.00
Rutland ASA Bloomer, major renovation	\$250,000.00	\$2,500,000.00	\$3.68	\$160,402.75	\$89,593.57
Southern State Correction Facility, door control project	\$1,450,000.00	\$1,450,000.00	\$0.00	\$0.00	\$1,450,000.00
Statewide, secure residential recovery facility, replacement, land acquisition, design, permitting and construction documents	\$3,000,000.00	\$2,962,937.00	\$0.00	\$909,909.00	\$2,053,028.00
Statewide, correctional facility, life safety and security needs and enhancements	\$250,000.00	\$246,911.00	\$0.00	\$0.00	\$246,911.00
Serenity House, residential treatment center, completion of addition and renovations	\$100,000.00	\$98,765.00	\$42,376.10	\$0.00	\$56,388.90
Major Maintenance at historic sites, statewide	\$250,000.00	\$246,911.00	\$0.00	\$0.00	\$246,911.00
Highgate Native American Cemetery, slope stabilization, Monument Road	\$100,000.00	\$98,765.00	\$0.00	\$0.00	\$98,765.00
Recreational Facilities Grant Program	\$200,000.00	\$200,000.00	\$149,330.00	\$0.00	\$50,670.00
Human Services Grant Program	\$100,000.00	\$100,000.00	\$38,412.00	\$0.00	\$61,588.00
Educational Grants	\$100,000.00	\$100,000.00	\$98,600.00	\$0.00	\$1,400.00
Regional Economic Development Grant	\$200,000.00	\$20,000.00	\$175,000.00	\$0.00	\$25,000.00
Design Documents for the reloactaion of the Middlesex Field Station	\$700,000.00	\$691,352.00	\$0.00	\$0.00	\$691,352.00
Agency of Agriculture, Food and Markets for Major Maintenance at the Vermont Building of the Eastern States	\$200,000.00	\$197,529.00	\$96,185.04	\$0.00	\$101,343.96