

Reports to the 2022 General Assembly



January 14, 2022
State of Vermont
Agency of Administration
Department of Buildings and General Services

Jennifer M.V. Fitch, P.E.
Commissioner

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

- *Submitted on October 1, 2021*



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, 2020 – June 30, 2021

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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 (EVT) collaboratively developed and launched the State Energy Management Program (Program) to accelerate energy management measures, implementation of energy efficiency and conservation, and the use of renewable energy resources for State buildings and facilities.

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

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.

The following information includes program information by fiscal year concerning the energy efficiency opportunities identified, developed, and implemented by BGS and EVT as reported in initial annual cost savings and cost savings over the entire life of the project measures implemented for the State of Vermont:

- FY2017, over \$150,000 of initial year savings and over \$1.2 million in lifetime savings.
- FY2018, over \$397,000 of initial year savings and over \$3.6 million in lifetime savings.
- FY2019, over \$227,000 of initial year savings and over \$2.7 million in lifetime savings.
- FY2020, over \$183,828 of initial year savings and over \$1.2 million in lifetime savings. Project development in the second half of FY2020 was limited due to the onset of the global pandemic caused by the Coronavirus and the COVID-19 disease (“COVID-19”).
- FY2021, over \$158,366 of initial year savings and over \$1.3 million in lifetime savings. Project development throughout FY2021 remained limited due to the health and safety restrictions in place in response to the global pandemic caused by the Coronavirus and the COVID-19 disease (“COVID-19”).

In FY2022, the seventh year of the program, these efforts will continue 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), as amended by 2020 Acts and Resolves No. 139, Sec. 17. Completed evaluations have developed into successful energy savings projects while new evaluations are identifying opportunities for future energy savings projects. While the sixth year of the program was a success and included a large increase in building square feet evaluated setting up a robust future project pipeline, the Program has experienced additional unforeseen turnover and continued project delays as a result of COVID-19. With two 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.

The Energy Office’s project development process has become an integral part of BGS’ standard operating procedures when evaluating the overall building portfolio management needs resulting in a cohesive roadmap for continued Program success.

FY2021: 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 EVT aimed to reduce the State's total energy usage and related costs by an amount not less than \$150,000 annually through measures implemented as part of the Program.

Actions:

- BGS and EVT are implementing the Program process, including:
 - Project identification, development, management, and completion procedures,
 - Hand-off points during the execution of projects, and
 - Documentation, tracking and reporting.

Program representatives from each organization continue to meet virtually due to COVID-19. Meeting goals include collaborative project identification, development, and management. Team meetings occur as needed 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. New data sharing with Vermont Gas will allow their fuel consumption tracking system for participating accounts to link directly to the BGS ESPM accounts to access detailed gas consumption data.
- BGS recently issued a Request For Proposals that resulted in four new contracts for professional energy auditing services. In FY2021, the Program team successfully audited over 376,261 square feet of building space, equal to 13% of BGS's total space. The increase in audited square feet, from 246,303 square feet in FY20, was a result of concerted efforts on the part of BGS Operations and Maintenance staff to work with the Energy Office and their audit vendors to adjust energy audit procedures to accommodate COVID-19 site safety protocols. While the square feet audited in FY2021 increased, the program saw a decrease in project savings because of the difficulty imposed by COVID-19 in initiating and completing construction projects across state facilities. However, the increase in energy audits has provided a robust pipeline of potential projects to be implemented in FY22. 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.
- Following on the success of the SEMP for state owned facilities, the State of Vermont has received approval for supplemental resources from Vermont Low Income Trust for Electricity (VLITE) and the Clean Energy Development Fund to establish the SEMP Expansion pilot initiative. BGS in partnership with the Public Service Department (PSD) requested \$150,000 a year for two years of a four-year pilot from VLITE to support project staffing and implementation activities. The Public Service Department has also secured approval from the US Department of Energy to access \$300,000 of federal resources for this pilot, \$150,000 per year. The SEMP Expansion pilot will utilize the collaboration between BGS, the PSD, EVT, and the Vermont League of Cities and Towns, to provide energy performance contracting services to municipalities and public schools who have traditionally been underserved in this area due to the complexity of financing and contracting associated with these types of construction projects.
- BGS and EVT, with support from Burlington Electric Department, identified, developed, and completed energy saving projects as shown in the tables below.

FY2021 Results:

Site	Project Focus	Cost	KWH*	MMBTU**	First-year \$ Savings	Lifetime \$ Savings	Payback Period.
Numerous locations	Efficiency VT Prescriptive Projects				\$6,031.60	\$90,215	
Numerous locations	Solar Net Metering				\$75,809***		
Barre Courthouse Lighting	LED Lighting and Controls	\$341,169.73	58,561		\$17,894.83	\$268,420.39	4.3
Middlebury Mahady Courthouse	LED lighting, Building Heating, Ventilation, Air Conditioning (HVAC)	\$81,323.62	63,794	13,519	\$36,071	\$541,076.07	2.3
Burlington 108 Cherry St	Exterior LED Lighting	\$2,773.75	29,415		\$286.30	\$4,294.29	9.6
Montpelier 120 State Street Can Lights	LED Lighting	\$1,080	5,610		\$634.95	\$9,524.78	1.7
Montpelier 120 State St Rm 103&105	LED Lighting	\$780	19,650		\$174.16	\$2,612.97	4.5
Royalton Police Barracks	LED Lighting	\$6,516.46	12,337		\$2,089.23	\$31,337.01	3
Newport Hebard State Office	LED Lighting	\$49,151.63	94,766		\$17,417.37	\$348,347.53	2.8
Pittsford Fire & Training Academy	Boiler Burner Replacement	\$13,714		1,991	\$1,958.39	\$29,374.73	7
Totals		\$496,509.19	284,133	15,510	\$158,366.83	\$1,325,202.77	

* Annual Kilowatt-hours of electricity saved.

** Annual million British thermal units (MMBTUs) representing thermal project savings.

*** Solar net metering savings are annual savings, not first year savings.

FY2022: 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 EVT aim to reduce the State's total energy usage and related costs in FY2022 by an amount not less than \$150,000 through measures implemented as part of the Program.

BGS and EVT anticipate accelerated project development and completion as a result of the robust project pipeline generated from the increase in energy audits. Performance in some program areas may be delayed due to staffing shortages and COVID-19 safety protocols.

Projected Savings:

Energy type	KWH	MMBTU	\$ Savings
Electricity	1,450,793		\$291,073
Thermal Fuels		17,925	
Solar Photovoltaic Net-Metering	5,850,592		\$79,770
Totals	7,301,385	17,925	\$370,843

A detailed list of planned FY2022 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 EVT 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 virtual meetings as needed.

Adequate Staffing

- EVT 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 EVT, 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 evaluations on state-owned buildings, following the procedures developed by BGS with the support of EVT.
- With technical assistance from Efficiency Vermont as needed, BGS's Energy Project Managers finalize each project's scope of work and procure resources for implementation.

- Upon request, EVT 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 ESPM, 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 can capture state employee fuel purchases through the WEX Fleet Purchase Card reporting system and will extend data tracking to EV fleet vehicles.
- 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.

FY2023: 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:

Energy type	KWH	MMBTU	\$ Savings
Additional Projects resulting from Energy Audits	1,010,064	4,385	\$191,929
Solar Photovoltaic Net-Metering	5,500,000		\$55,356
Totals	6,5010,064	4,385	\$247,285

Strategies:

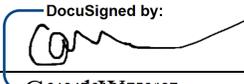
Ongoing, collaborative, and systematic project identification, development, and management will remain critical to the long-term success of the Program. BGS and EVT will continue to execute the strategies as noted in the Memorandum of Understanding, making modifications and improvements as needed.

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 EVT, through the development, launch, and implementation of the SEMP, have successfully achieved \$158,366 of annual energy savings and \$1,325,202 of lifetime savings for projects implemented in FY2021. With current staffing shortages, recruitment for vacant positions to support the SEMP will need to be prioritized to ensure that the program will continue to produce the required annual savings, and significant lifetime savings, for the State of Vermont.

Efficiency Vermont

By: 
Name: Carol Weston
Title: Director

State of Vermont
Department of Buildings and General Services

By: 
Name: Jennifer M. V. Fitch, P.E.
Title: Commissioner

Appendices

FY2022 Detailed Project List:

Site	Project Focus	kWh	MMBTU	\$ Savings
Southern State Correctional Facility	LED Lighting, HVAC, Solar DHW	409,602	2,902	\$79,258
133 State St Mont.	Windows	48,712		\$51,770
Bennington Courthouse	LED Lighting	60,122		\$3,802
Rutland Asa-Bloomer Bldg	LED Lighting	135,291		\$19,574
Rutland Courthouse	Envelope, HVAC, Lighting	187,920	400	\$34,501
Bennington Bennco	LED Lighting, Controls	20,482	41	\$3,651
St. Albans Courthouse	LED Lighting, Equipment, Weatherization	22,690	367	\$7,471
New Haven Pub Safe Campus	LED Lighting, Building Equipment, Weatherization	22,250	61	\$4,349
109 State St & Connector Mont.		273,377	718	\$40,879
120 State St Mont.	LED Lighting, HVAC	133,331	1,032	\$26,612
Bennington Welcome Center	LED Lighting, Controls	30,008	4.2136	\$4,557
115 State St & Annex Mont.	LED Lighting, BAS, HVAC, Controls	93,403	12,399	\$12,399
Montpelier 2 Governor Aiken Ave	Windows, LED Lighting	7,761		\$1,507
Montpelier 4 Governor Aiken Ave (6002)	Windows, LED Lighting and Envelope	5,844		\$743
Totals		1,450,793	17,925	\$291,073

Future Projects Under Development from Completed Energy Audits:

Site	kWh	MMBTU	\$ Savings
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
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
Rutland McKinley Ave - COMPLEX	14,213	17	\$2,452
Rutland Motor Vehicles (6307)	6,374	36	\$1,380
Barre McFarland State Office Bldg (6071)	90,984	690	\$27,032
St. Johnsbury State Office Building (6340)	12,925	58	\$2,727
Burlington Costello Courthouse(6173)	229,800	2,420	\$54,350
Montpelier 6 Baldwin St (6004)	34,729	191	\$6,780
Montpelier 126 State St (6022)	2,492	217	\$4,082
Montpelier 122 State St Boiler Plant (6021)	52,510		\$6,166
Montpelier 10 Taylor St Shop and Storage (6013)		117	\$1,347

Marble Valley Regional Correctional Facility	TBD	TBD	TBD
Totals	1,010,064	4,385	\$191,929

Future Scheduled Energy Audits:

Property Name	Property GFA - Self-Reported (ft ²)
Montpelier 1 Baldwin St (6003)	7,952
Montpelier 134 State St (6026)	3,048
Colchester New Health Lab (6204)	61,600
Montpelier 111 State St (6016)	46,672
Bradford Rest Area (9707)	6,861
St. Albans Troop Headquarters - CAMPUS	11,634
Berlin Vermont State Hospital (6091)	46,564
Colchester Bldg 1710 (6201)	12,798
St. Johnsbury CCWC - CAMPUS	28,437
Newport NSCF	135,985
St. Albans NWSCF - CAMPUS	94,185
Totals	455,736

BGS, with support from EVT, developed this prioritized-buildings list using two primary criteria; Energy Cost Intensity (ECI, measured in \$/ft²) and Site Energy Use Intensity (EUI, measured in kBtu/ft²). ECI shows how much BGS spends in electricity and fuel per building per ft². Site EUI measures how much electricity and fuel a building consumes per ft².

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 – Buildings and General Services – Fleet Management Services – High Mileage Users
[Act 179 of 2014 E.118 (a)]

FY 2021 HIGH MILEAGE USERS REPORT

Background

As a part of the Fleet Management Services (FMS) program, the Department of Buildings and General Services (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 2021 review:

Number of Employees Reimbursed for Mileage at the Full Rate	1,498
Total Miles Reimbursed at Full Rate	2,159,660
Total Cost to State	\$ 1,228,783
Number of Employees Reimbursed More Than 12,000 Miles at Full Rate (High Mileage Users)	32
Total Miles Reimbursed by the 27 Employees	572,732
• Average Miles Driven per Employee	17,898
Total Cost to State	\$ 326,163
• Average Reimbursement Per Employee	\$ 10,193

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 FY2021 is 12,000 miles. For travel greater than 12,000 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, that during fiscal year 2021 exceeded the 12,000-mile breakeven point:

State Employees Reimbursed > 12,000 Miles (Breakeven Point)

Department	# Of Employees	Total Miles	Total Amt Reimbursed
Transportation Agency	12	237,289	\$ 135,509
Corrections	8	127,764	\$ 72,649
Judiciary	7	118,571	\$ 67,327
Labor	3	46,654	\$ 26,991
Environmental Conservation	2	37,461	\$ 21,350
Totals	32	527,732	\$ 326,163

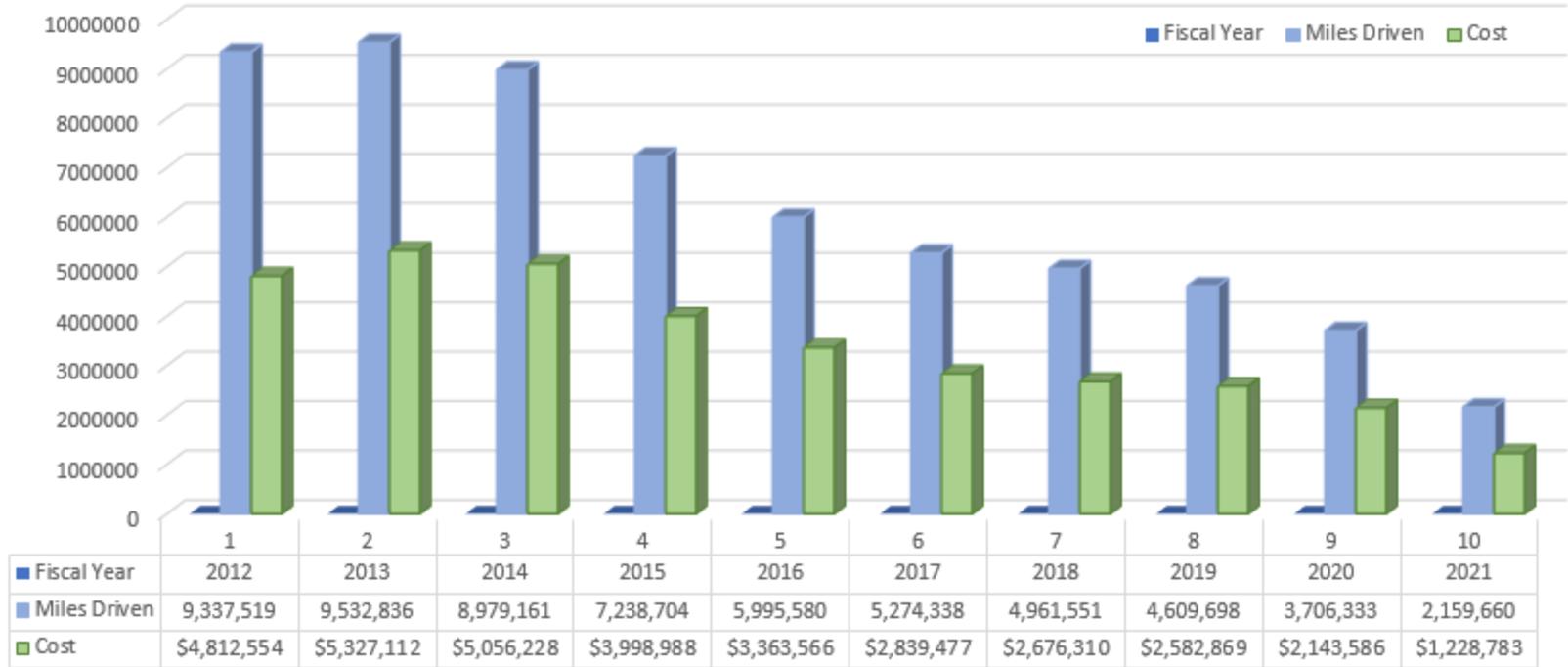
Mileage Reimbursement History

Full-Rate Mileage Reimbursements by Fiscal Year

Fiscal Year	Miles	Cost
2021	2,159,660	\$1,228,783
2020	3,706,333	\$2,143,586
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

Report to the 2022 Legislature

**Full-Rate Mileage Reimbursement
By Fiscal Year - 2012 thru 2021**



**FLEET MANAGEMENT SERVICES
HIGH MILEAGE DRIVER REPORT**

AMOUNT REIMBURSED - FY 2018-FY2021



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 15th 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 FY2021.

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 FY2021 with a negative fund balance of \$21,681,655 M. As shown below, the negative fund balance has decreased by \$1,898,736 in FY2021.

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 current negative fund balance of \$11,498,411 created by these buildings will be slowly eliminated, reducing the property management deficit. The remaining \$9,685,646 does not currently have a funding source to pay down the deficit. The Administration requested \$10,000,000 in the proposed FY22 Budget Adjustment Act to pay down the portion of this deficit. At the time of this legislative report, we are awaiting approval of the funding request from the Legislature.

The decrease in FY2021 is mostly attributed to increased revenue associated with COVID-19 related back charge expenses. The expectation is that this will not continue in FY2022 and beyond, but that the negative fund balance will continue to decrease due to the “Property Management Treasurer Buildings” haven been completely paid off, while still collecting the revenue from the tenants of those buildings to pay off that portion of the deficit by year 2048.

The FY2021 total cost of leases was \$17,569,320.

The Fund Balance at the end of FY2021 was **(\$21,681,655M)** based on the following revenues and expenses.

Revenues	\$24,932,944
Cost of Goods Sold	(\$19,319,947)
Operating Expenses	<u>(\$3,714,262)</u>
Net Income	\$1,898,735
Fund Balance 6/30/2020	(\$23,580,391)
Fund Balance 6/30/2021	(\$21,681,656)

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, 2022

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 (BGS) 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 (SRMRF) for resource conservation measures and the State Energy Revolving Fund (SERF) 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 \$2,725,378 from the SRMRF in energy projects that have resulted in over \$2,921,776 in avoided energy costs to date. The SRMRF currently has \$210,191.85 available for funding future energy efficiency projects.

In total, sixty-four (64) projects have received funding through the SRMRF. These projects have conserved over 182,243 MMBTU of energy and reduced roughly 15,505 metric tons of carbon dioxide (MTCO_{2e}) equivalent greenhouse gas emissions.

Six (6) projects were approved for funding in 2021 as outlined below:

- BGS is conducting a Flexible Load Management pilot program with Green Mountain Power at the Waterbury State Office Complex, Bennington District Court and Office, and Brattleboro State Office in Waterbury, Bennington, and Brattleboro, VT.

This project is estimated to cost \$56,838 and will save an estimated \$12,818 annually in energy costs, and 87 MTCO_{2e} over the life of the project.

- BGS is replacing exterior windows at Brattleboro State Office Building at 232 Main Street in Brattleboro, VT.

The energy efficiency portion of the project is estimated to cost \$2,773 and will save an estimated \$286 annually in energy costs, 6.69 MMBTU annually, and 0.7 MTCO_{2e} over the life of the project.

- BGS is replacing existing old and failing fluorescent lighting with LED retrofit kits in rooms 103 & 105 at the 120 State Street Offices in Montpelier, VT.

This project is estimated to cost \$904 and will save an estimated \$174 annually in electricity costs, and 8 MTCO_{2e} over the life of the project.

- BGS is replacing fluorescent can lights with LEDs at the Department of Motor Vehicles (DMV) offices 120 State Street in Montpelier, VT.

This project is estimated to cost \$1,080 and will save an estimated \$635 annually in electricity and maintenance costs and 11 MTCO_{2e}.

- BGS is upgrading existing fixtures with LED retrofit fixtures on the second floor of the Commercial Vehicle Operations area at 120 State Street in Montpelier, VT.

This project is estimated to cost \$804 and will save an estimated \$210 annually in electricity costs, and 3.3 MTCO_{2e} over the life of the project.

- BGS is replacing the existing high intensity lighting in the ceiling fixtures of the tunnel between the parking garage and Center Street with LEDs and motion sensors, at the Multi-modal Transit Center, 102 West Street in Rutland, VT.

This project cost \$660 and will save an estimated \$1,087 annually in electricity costs, and 49 MTCO_{2e} over the life of the project.

State Energy Revolving Fund (SERF) Project Summary

State government has invested \$2,905,238 from the SERF in energy projects that have resulted in over \$915,868 in avoided energy costs to date. A credit facility of up to \$8 million may be established at the Treasurer's discretion of which \$5,031,626 is currently available for approval to fund additional energy projects.

In total, fourteen (14) projects have received funding through the SERF. These projects have helped to conserve over 19,874 MMBTU of energy and reduce roughly 2,110 MTCO_{2e} greenhouse gas emissions.

One (1) project was approved for funding in 2021 as outlined below:

- The Department of Buildings and General Services will replace existing emergency lighting with new LED lighting emergency fixtures and 90-minute battery backup ballasts at the Asa Bloomer Office Building in Rutland, VT.

This project is estimated to cost \$27,440 and will save an estimated \$7,100 annually in electricity and maintenance costs, 21,803 kWh annually, and 9.3 MTCO_{2e} annually.

As a result of logistical challenges related to the COVID-19 pandemic, the development and implementation of new SRMRF and SERF projects was significantly constrained in 2021. New interior construction projects will increase as we continue to implement safe construction practices created during the pandemic, while ensuring the safety of state employees who must continue to carry-out their job duties within state owned facilities. In addition, project development constraints concerning the required 7-year payback period for the SERF have reduced the number of approved projects over the last several fiscal years. Removing the 7-year required payback for SERF loans would increase the number of approved projects.

The BGS Energy Office administers the State Energy Management Program (SEMP). The Energy Office is involved in multiple ongoing 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, including the development and expansion of an electric vehicle charging infrastructure program to serve Fleet Management Services, State employees, and the public. In accordance with [2015 Acts and Resolves No. 58, Sec. E.112, as amended by 2019 Acts and Resolves No. 72, Sec. E.112](#), on or before October 1st 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 2021 SEMP annual report can be found here:

https://legislature.vermont.gov/assets/Legislative-Reports/SEMP_Annual_Report_FY21.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 15th, 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	PROJECT BUDGET	AMOUNT EXPENDED	ENUCMBRANCE AMOUNT	PROJECT BALANCE	COMMENTS
ACTS OF 2012					
Vermont Veterans' Home Mold Phase II	\$354,439.00	\$321,920.28		\$32,518.72	
ACTS OF 2013					
Renovation and replacement of Vermont State Hospital, related projects	\$8,030,000.00	\$7,973,821.51	\$61,789.28	\$0.00	
Statewide Major Maintenance	\$4,929,706.02	\$3,883,686.84	\$52,096.22	\$223,389.81	
ACTS OF 2014					
Statewide Major Maintenance	\$5,629,050.39	\$5,610,640.35	\$11,491.04	\$6,919.00	
Secure Residential facility, siting & Design	\$50,000.00	\$49,624.75	\$279.12	\$96.13	
Veterans' Home Kitchen Remodel-Federal Fund Match	\$433,582.00	\$412,088.41		\$21,493.59	
ACTS OF 2015					
Agency of Agriculture and ANR design construction documents/permitting	\$2,499,997.00	\$2,248,567.53	\$251,429.47	\$0.00	
Middlesex State Archives Renovations	\$646,371.75	\$601,575.58	\$7,350.00	\$37,446.17	
WRJ, Windsor Court design/planning/mechanical/security/energy upgrades	\$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	
ACTS OF 2016					
Statewide Major Maintenance	\$4,512,592.29	\$4,296,969.58	\$121,492.89	\$577.75	
Engineering Design for State House Generator	\$150,000.00	\$140,128.97	\$2,880.50	\$7,490.53	
SSCF Steamline Replacement Phase 1 & design/cost Phase 2	\$200,000.00	\$48,118.37	\$4,813.00	\$147,068.63	
Southern State Correction copper waterline replacement	\$1,062,271.89	\$971,840.47	\$7,580.00	\$82,851.42	
Waterbury State Office Complex restoration & project costs	\$2,000,000.00	\$1,965,276.26	\$23,707.74	\$11,016.00	
Corrections, Perimeter Intrusion	\$99,089.50	\$70,658.86		\$28,430.64	
Westminster, DPS Facility project cost adjustment for site conditions	\$396,357.00	\$391,834.01	\$0.00	\$4,522.99	
Roxbury Fish Hatchery reconstruction Project	\$2,120,502.34	\$2,120,502.34	\$6,348.00	\$13,261.84	
ACTS OF 2017					
Statewide, planning, use and contingency	\$482,796.92	\$345,537.37	\$121,004.43	\$16,255.12	
Statewide Major Maintenance	\$6,053,955.15	\$5,806,215.81	\$247,739.34	\$0.00	
Statewide, BGS engineering and architectural project costs	\$812,504.00	\$808,287.38	\$0.00	\$4,216.62	
Statewide, physical security enhancements	\$270,000.00	\$269,507.99	\$492.01	\$0.00	
Springfield SSCF completion of the steamline replacement	\$300,000.00	\$22,952.61	\$240,664.84	\$36,382.55	
Newport NSCF, door control replacement	\$1,000,000.00	\$927,712.46	\$72,287.54	\$0.00	
Montpelier, 109 and 111 State Street Design	\$286,106.15	\$241,442.53	\$13,413.30	\$31,250.32	
Burlington, 108 Cherry St, parking garage, repairs	\$2,131,094.00	\$232,097.02	\$307,117.46	\$1,591,879.52	
Roxbury Fish Hatchery reconstruction Project	\$2,684,779.00	\$2,648,941.37		\$35,837.63	
Williston Public Safety Field Station site acquisition, design, permitting & construction documents	\$1,902,047.00	\$1,864,445.09	\$37,601.91	\$0.00	
Vermont Veteran's Home kitchen renovations and mold remediation	\$296,115.00	\$86,581.10		\$209,533.90	
ACTS OF 2018					
Statewide, planning, use and contingency	\$561,786.58	\$267,667.53	\$183,302.55	\$110,816.50	
Statewide Major Maintenance	\$7,652,593.71	\$5,802,714.41	\$1,582,367.27	\$267,512.03	WILL BE USED FOR BGS MOVING COSTS
Montpelier State house, Dome, Drum & Ceres, design, permitting, construction, restoration, renovation and lighting	\$1,700,000.00	\$1,682,527.29	\$0.00	\$17,472.71	
Montpelier 120 State St, life safety and infrastructure improvements	\$1,511,691.89	\$1,510,048.85	\$1,643.04	\$0.00	
Randolph, Agency of Agriculture, Food and Markets and of Natural Resources, collaborative laboratory, construction	\$3,944,000.00	\$3,577,471.23	\$0.00	\$366,528.77	
Waterbury, WSOC Weeks building renovation and fit up	\$1,152,085.00	\$735,360.20	\$22,961.09	\$393,763.71	
Newport, Northern State Correctional Facility, doore control replacement & perimeter control	\$1,715,000.00	\$1,611,358.38	\$103,641.62	\$0.00	

PROJECT	PROJECT BUDGET	AMOUNT EXPENDED	ENUCMBRANCE AMOUNT	PROJECT BALANCE	COMMENTS
Montpelier, 109 & 111 State St, final design & construction	\$48,838.06	\$3,710.00	\$0.00	\$45,128.06	
Montpelier, 133 State St, renovations of mainframe workspace to Office Space (ADS)	\$700,000.00	\$0.00	\$76,714.00	\$169,734.26	
Rutland, ASA Bloomer building, rehabilitation of building and components and systems, and planning and use study	\$1,050,000.00	\$942,850.00	\$107,150.00	(\$0.00)	
Springfield, State Office Building, repair of the retaining wall, and environmental remediation associated with retaining wall project	\$1,906,341.75	\$1,906,341.75	\$0.00	\$0.00	
St. Albans, Frankly County Courthouse, ADA renovations, new handicap access ramp and related exterior renovations	\$300,000.00	\$124,563.76	\$175,436.24	\$0.00	
Waterbury, WSOC , Stanley & Wasson, demolition of Stanley Hall and programming, schematic design and design development for Wasson Hall	\$950,000.00	\$593,714.65	\$11,913.40	\$344,371.95	
Rutland, MVRFCF, repair of the historic brick and stone masonry wall used as the perimeter security for the facility	\$697,052.94	\$694,202.94	\$2,850.00	\$0.00	
Statewide Correctional Facilities cameras, locks & perimeter intrusion	\$299,484.00	\$246,123.57	\$0.00	\$53,360.43	
Chittenden County Regional Correctional Facility and Northwest State Correctional Facility, renovations, beds for therapeutic placement	\$598,967.00	\$18,268.46	\$537,123.50	\$43,575.04	
Major Maintenance at Historic Sites Statewide	\$299,484.00	\$296,220.21	\$3,263.79	\$0.00	
Construction of the Williston Public Safety Field Station	5,563,407.00	\$52,566.04	\$5,510,840.96	\$0.00	
East Cottage, Robert H. Wood Criminal Justice & Fire Training Center, renovation and Fit-up and historic windows	\$1,846,815.00	\$1,414,876.76	\$240,522.40	\$191,415.84	
Acts of 2019					
Statewide, planning, use and contingency	\$700,000.00	\$209,581.06	\$49,580.00	\$440,838.94	
Statewide Major Maintenance	\$6,468,685.29	\$4,428,518.99	\$1,525,764.93	\$99,451.14	
Statewide, BGS engineering and architectural project costs	\$1,364,780.86	\$941,777.10	\$0.00	\$423,003.76	
Statewide, physical security enhancements	\$275,000.00	\$271,528.98	\$0.00	\$3,471.02	
108 Cherry St, Parking Garage Repairs	\$3,000,000.00	\$50,000.00	\$0.00	\$2,950,000.00	
120 State St stair towers and rear entry	\$3,043,691.89	\$2,436,892.08	\$0.00	\$1,063,107.92	
State House New carpeting or repair of carpeting near the Governors Ceremonial office, the Cedar Creek Room and the Card Room.	\$45,000.00	\$0.00	\$0.00	\$45,000.00	
Montpelier DOL Facilities modernization project	\$120,000.00	\$69,255.29	\$50,744.71	\$0.00	
Northeast State Correctional Facility, direct digital HVAC control system replacement	\$900,000.00	\$14,292.48	\$504,511.21	\$381,196.31	
Rutland ASA Bloomer, major renovation	\$250,000.00	\$215,624.66	\$32,720.46	\$1,654.88	
Southern State Correction Facility, door control project	\$1,450,000.00	\$439,384.72	\$192,986.65	\$817,628.63	
Statewide, secure residential recovery facility, replacement, land acquisition, design, permitting and construction documents	\$2,962,937.00	\$1,414,505.80	\$1,548,431.20	\$0.00	
Statewide, correctional facility, life safety and security needs and enhancements	\$246,911.00	\$178,477.51	\$68,432.49	\$1.00	
Major Maintenance at historic sites, statewide	\$246,911.00	\$163,962.93	\$82,948.07	\$0.00	
Design Documents for the reloactaion of the Middlesex Field Station	\$691,352.00	\$659,307.14	\$32,044.86	\$0.00	
Big E	\$197,529.00	\$188,531.50	\$8,997.50	\$0.00	
Acts of 2020					
Statewide, BGS engineering and architectural project costs	\$3,735,000.00	\$482,882.49	\$0.00	\$3,252,117.51	
Statewide, physical security enhancements	\$275,000.00	\$51,171.55	\$1,950.00	\$221,878.45	
Statewide Major Maintenance	\$6,776,507.00	\$1,551,913.70	\$1,530,709.39	\$3,693,883.91	
Statewide, planning, use and contingency	\$529,077.00	\$0.00	\$0.00	\$529,077.00	
108 Cherry St, Parking Garage Repairs	\$7,400,000.00	\$50,000.00	\$0.00	\$7,350,000.00	

PROJECT	PROJECT BUDGET	AMOUNT EXPENDED	ENUCMBRANCE AMOUNT	PROJECT BALANCE	COMMENTS
State House, new drapes and carpeting in the Governor's ceremonial office or in the vesibule near the Governor's ceremonial office, the Hall of Flags, Senate Secretary's Office and carpeting or carpeting repair in the Card Room	\$75,000.00	\$0.00	\$0.00	\$75,000.00	
Montpelier DOL Facilities modernization project	\$300,000.00	\$0.00	\$9,056.54	\$290,943.46	
Northeast State Correctional Facility, direct digital HVAC control system replacement	\$900,000.00	\$0.00	\$0.00	\$900,000.00	
Rutland ASA Bloomer, major renovation	\$250,000.00	\$72,499.00	\$148,147.00	\$29,354.00	
Southern State Correction Facility, door control project	\$1,000,000.00	\$0.00	\$1,000,000.00	\$0.00	
Montpelier, State House, HVAC, planning and design to address air quality and mold Issues	\$500,000.00	\$25,661.00	\$334,539.00	\$139,800.00	
Newport, Orleans County Courthouse, replacement, site acquisition, planning, and design for stand-alone courthouse with no retail space	\$1,500,000.00	\$20,500.00	\$0.00	\$1,479,500.00	
Statewide, installation of electric vehicle charging facilities in State-owned parking lots under the jurisdiction of BGS	\$75,000.00	\$0.00	\$0.00	\$75,000.00	
State House, cafeteria renovation for a flexible meeting room	\$57,000.00	\$11,612.78	\$12,607.22	\$32,780.00	
AHS - Residential Recovery	\$1,499,043.00	\$57,031.73	\$97,340.00	\$1,344,671.27	
AHS - Corr Fac Safety & Security	\$224,857.00	\$4,399.14	\$0.00	\$2,204,457.86	
Greenhouse Rebuild	\$199,872.00	\$10,868.40	\$26,131.60	\$162,872.00	
Construction of the Williston Public Safety Field Station	\$5,396,556.00	\$0.00	\$5,396,556.00	\$0.00	
Design Documents for the reloactaion of the Middlesex Field Station	\$1,998,725.00	\$272,113.81	\$1,638,541.31	\$88,069.88	
Agency of Agriculture, Food and Markets for Major Maintenance at the Vermont Building of the Eastern States	\$279,821.00	\$215,155.56	\$48,303.75	\$16,361.69	
Acts of 2021					
Statewide, BGS engineering and architectural project costs	\$997,407.00	\$0.00	\$0.00	\$997,407.00	
Statewide, physical security enhancements	\$250,000.00	\$0.00	\$0.00	\$250,000.00	
Statewide Major Maintenance	\$6,957,925.00	\$0.00	\$0.00	\$6,957,925.00	
Statewide, planning, use and contingency	\$500,000.00	\$0.00	\$0.00	\$500,000.00	
108 Cherry St, Parking Garage Repairs	\$3,100,000.00	\$0.00	\$0.00	\$3,100,000.00	
Montpelier State House maintenance of interior historic finishes	\$50,000.00	\$0.00	\$0.00	\$50,000.00	
Montpelier State House exhibition, interpretation design and construction	\$40,000.00	\$0.00	\$0.00	\$40,000.00	
Newport Courthouse replacement, planning and design	\$500,000.00	\$0.00	\$0.00	\$500,000.00	
Rutland ASA Bloomer, major renovation	\$400,000.00	\$0.00	\$0.00	\$400,000.00	
Southern State Correction Facility, door control project	\$2,750,000.00	\$0.00	\$0.00	\$2,750,000.00	
Waterbury State Office Complex, historic core roof replacements	\$1,000,000.00	\$0.00	\$0.00	\$1,000,000.00	
AHS-Res Recovery Facility	\$11,495,447.00	\$7,608.00	\$45,000.00	\$11,442,839.00	
AHS-Womens Corr Facility	\$495,493.00	\$0.00	\$0.00	\$495,493.00	
SW Corr Facility Enhancement	\$247,747.00	\$0.00	\$0.00	\$247,747.00	
Recreational Grants	\$300,000.00	\$98,402.50	\$0.00	\$201,597.50	
Human Services Grant	\$150,000.00	\$21,377.50	\$0.00	\$128,622.50	
Educational Grant	\$150,000.00	\$88,979.00	\$0.00	\$61,021.00	
Regional Economic Development Grant	\$300,000.00	\$246,233.00	\$0.00	\$53,767.00	
BIG E	\$257,657.00	\$72,041.23	\$70,155.73	\$115,460.04	
DPS Williston Field Station	\$5,569,346.00	\$10,175.00	\$2,391,786.54	\$3,167,384.46	
DPS Middlesex Field Station	\$495,493.00	\$0.00	\$0.00	\$495,493.00	
DOL Upgrades	\$495,493.00	\$0.00	\$0.00	\$495,493.00	