



State Agency Energy Plan and the State Energy Management Program

Improvements Needed for Tracking and
Reducing State Energy Consumption;
BGS Overstated Savings in a Selection of
Energy Efficiency Projects



Mission Statement

The mission of the Auditor's Office is to hold State government accountable by evaluating whether taxpayer funds are being used effectively and identifying strategies to eliminate waste, fraud, and abuse.

Audit Team

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Dear Colleagues,

For decades, the Vermont Legislature has emphasized the need for State government to reduce energy consumption. Since the 1990s, the State has developed a State Agency Energy Plan (SAEP) to provide strategies to reduce energy consumption and associated pollution by State entities. In 2011, the Legislature required State entities to reduce their energy consumption by five percent annually. In 2014, the Legislature created the State Energy Management Program (SEMP), run by the Energy Office in the Department of Buildings and General Services (BGS), to identify and implement energy efficiency projects in State buildings. Overall savings from SEMP projects are supposed to exceed project costs.

During an audit in 2015, we found the State had limited information on the implementation of the SAEP and did not know the extent to which SAEP objectives were met. During this audit, we found that BGS is not measuring the State's progress in meeting the SAEP's goals of saving taxpayer money and protecting the environment. One reason preventing BGS from measuring progress is that they have not developed a way to capture the amount of energy used in State-owned or leased buildings, nor have they established a system to capture the amount of transportation fuel used by State employees. Additionally, some goals lacked baselines to measure progress against. Vermont law requires BGS to report biennially to the Secretary of Administration on the implementation of the SAEP. However, BGS has not done so.

Although BGS generally selects SEMP projects that meet payback requirements, questionable practices allowed two projects to proceed that lost money. One project, which cost \$143,170 more than it will save, was allowed to proceed because it was "bundled" with a cost-effective project. The second project was partially paid for with non-SEMP funds and cost \$550,687 more than its expected lifetime savings.

The number of energy efficiency projects completed has fallen sharply since 2022. BGS acknowledges that staffing issues are the primary constraint on its current ability to implement projects. One or both energy project manager positions have been vacant since 2021.

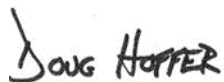
We also found that BGS developed a pipeline of projects only for BGS-controlled buildings, excluding other State buildings from consideration for efficiency projects. As such, BGS may be missing opportunities to identify and generate additional energy and cost savings. Additionally, BGS did not evaluate and incorporate, where appropriate, energy efficiency measures in spaces leased by the State, as required by law.

BGS did not validate energy savings with Efficiency Vermont (EVT). We compared the lifetime dollar savings estimated by BGS with the lifetime dollar savings estimated by EVT for a selection of 13 projects. For nine of the projects, we found that BGS's savings differed from EVT's savings by more than 30 percent. Overall, BGS overstated lifetime dollar savings by \$1,666,511 for the projects reviewed, when compared to EVT's lifetime savings. We also found that BGS claimed annual and lifetime savings for the same project twice.

We also found three other deficiencies. (1) The SAEP goals did not align with the energy reduction requirements of Act 40 (2011), which calls for all state entities to reduce energy consumption by 5 percent annually. (2) The memorandum of understanding between BGS and EVT expired six years ago, and the Legislature has twice required BGS and EVT to execute a new one or amend the old one. BGS and EVT have not done so and remain in contravention of the law. (3) BGS overstated first-year savings in reports to the Legislature because it included ongoing solar net metering savings. After removing the savings from solar net metering, the SEMP did not achieve its target of \$150,000 in new savings annually for most of the fiscal years from 2017 through 2025.

I would like to thank BGS and EVT staff, as well as staff at various entities associated with the SEMP, for their cooperation and professionalism throughout the audit.

Sincerely,



DOUGLAS R. HOFFER
State Auditor

ADDRESSEES

The Honorable Jill Krowinski
Speaker of the House of Representatives

The Honorable Phil Scott
Governor

Mr. Adam Greshin
Commissioner, Department of Finance and Management

The Honorable Philip Baruth
President Pro Tempore of the Senate

Ms. Sarah Clark
Secretary, Agency of Administration

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Highlights

In the last ten fiscal years (2016-2025), the energy costs in state government buildings have cost taxpayers \$137 million. State government's use of gasoline and diesel transportation fuels has cost taxpayers \$61 million during the same period. This does not include the \$28 million in mileage reimbursement expenses the State paid to its employees who used their personally owned vehicles for in-state business travel, as those reimbursements are based on a rate per mile and not the cost of fuel consumed.

For decades, the Vermont Legislature has emphasized the need to reduce energy consumption. Since the 1990s the State has developed a State Agency Energy Plan (SEAP) to provide strategies to reduce energy consumption and associated pollution by state entities. We released an [audit in 2015](#), which found that the State had limited information about the extent to which the SAEP was implemented and did not know the extent to which the SAEP objectives were met.

[In 2011](#), the Legislature required state entities to reduce their energy consumption by five percent annually. [In 2014](#), it created the State Energy Management Program (SEMP) to identify and implement energy efficiency projects in State buildings. The SEMP is run by the Energy Office in the Department of Buildings and General Services (BGS).

Given the Legislature's understandable interest in reducing Vermont state government's energy usage, and the related cost reduction to Vermont taxpayers and associated climate benefits, we decided to: (1) Evaluate how the State is measuring State government's progress in meeting the SAEP goals, (2) Determine whether the BGS Energy Office selects the most cost-efficient energy savings projects for buildings, and (3) Determine whether the BGS Energy Office assessed the outcomes of energy savings projects for buildings.

Objective 1 Finding

BGS is not measuring State government's progress in meeting the goals of the SAEP, which include reducing energy consumption and greenhouse gas emissions. Therefore, the State does not know whether it is on track to meet these goals.
Reducing energy consumption not only has environmental benefits, but also saves taxpayers money.

"As one of Vermont's largest energy users, state government has an important role to play in demonstrating how public- and private-sector organizations from across the state can contribute to meeting Vermont's energy and climate goals, while also saving money..."

- Quote from the current State Agency Energy Plan

Biennially, BGS is required to report to the Secretary of Administration on the implementation of the SAEP. However, BGS has not been doing so and cannot reliably report on progress towards achieving the goals of the SAEP for the following reasons.

- BGS has not established a system to capture all State-owned building energy use.
- BGS does not have documented baselines against which to measure progress.
- BGS has not implemented a system to capture the amount of energy used in leased building spaces, which is paid for by the State either directly or as part of the lease.
- BGS has not implemented a system to accurately capture the quantity of transportation fuels used by State employees.

Objective 2 Finding

BGS generally selects the most cost-effective energy efficiency projects, but questionable loan application practices open the door for waste. For example, one project cost \$72,749 more than BGS reported it would save over the useful life. According to data from Efficiency Vermont (EVT), BGS saved even less money. Based on EVT's lifetime savings estimate, this project cost \$143,170 more than it will save. This money-losing project was allowed to move forward because it was "bundled" with a cost-effective project at a different location, which gave the two combined projects a positive return.

BGS also misstated the cost and lifetime savings for a project that used both SEMP and non-SEMP funds. BGS did not report the portion of that project's cost paid for by non-SEMP funds, and that project actually cost \$550,687 more than its expected lifetime savings.

The number of projects completed has fallen sharply since 2022. BGS acknowledges that staffing issues are its primary constraint on its current ability to implement projects. One or both of the energy project manager positions have been vacant since 2021. These are the personnel that develop the scope of a project and coordinate the work.

BGS may be missing opportunities to identify and generate energy and cost savings because it only contracts for energy audits on buildings it controls, not other State-owned buildings, and BGS does not consider leased space for energy efficiency projects.

Objective 3 Finding

The BGS Energy Office did not reliably assess outcomes of energy savings projects for buildings. A Memorandum of Understanding (MOU) between BGS and EVT required EVT to finalize and document the savings resulting from energy efficiency projects. We selected 13 projects completed between fiscal years 2018 and 2025 and compared the lifetime dollar savings that BGS recorded with the lifetime savings that EVT recorded. We found that BGS's lifetime dollar savings differed by more than 30 percent from EVT's lifetime dollar savings for 9 of the projects, indicating BGS did not finalize savings data with EVT. **Overall, BGS overstated lifetime dollar savings by \$1,666,511 for the projects reviewed when compared to the lifetime savings recorded by EVT.**

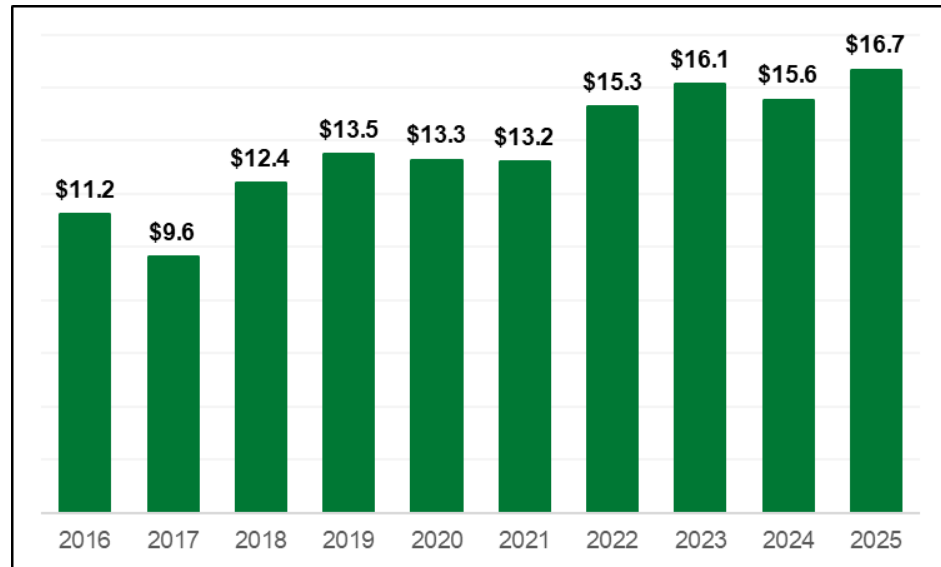
Recommendations

We made recommendations to the BGS Commissioner, such as contract for energy audits on buildings controlled by all State entities, not just BGS-controlled buildings, intended to help the Department abide by the law in order to reduce energy consumption and greenhouse gas emissions, which ultimately benefits the Vermont taxpayers.

Background

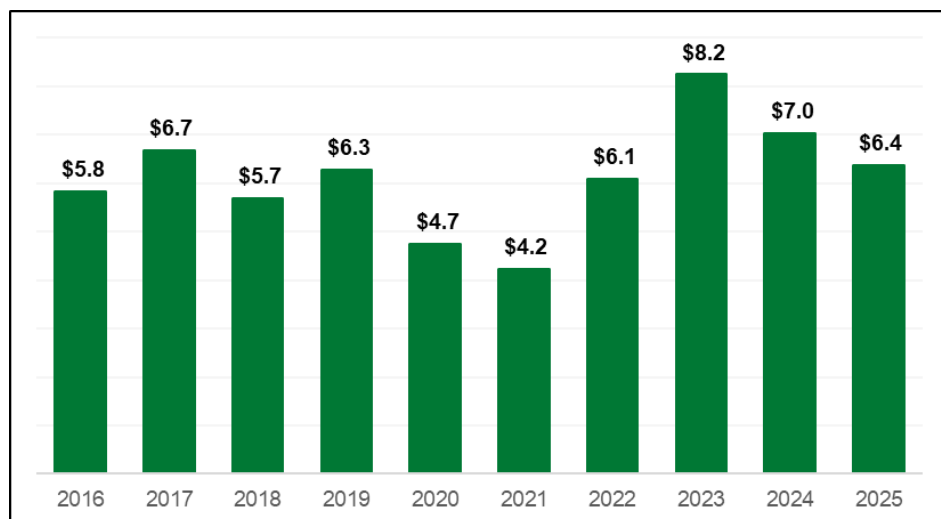
In the last decade, costs stemming from energy use in state buildings have generally been increasing, as shown in Exhibit 1 below, except in 2020 and 2021 during the COVID-19 pandemic. See Appendix III for more details on building energy costs for the last ten fiscal years.

Exhibit 1: State Government Building Energy Cost (in millions) by Fiscal Year



The State's gasoline and diesel costs have had greater fluctuations, as shown in Exhibit 2 below. Appendix IV contains more details on gasoline and diesel costs for the last ten fiscal years.

Exhibit 2: State Government's Gasoline & Diesel Costs (in millions) by Fiscal Year



State Agency Energy Plan (SAEP)

The SAEP is required by [Vermont law](#). It is intended to provide guidance for Vermont state agencies when making decisions about energy in state government operations. The plan is updated every six years, and the last update was in 2022. The BGS Energy Office is responsible for overseeing the implementation of the plan.

The [2022 SAEP](#) has three primary goals. These goals are similar to the three primary goals in the 2016 SAEP, except that the 2016 SAEP energy consumption reduction goal was 20 percent by 2025 and 25 percent by 2035, as shown in Exhibit 3 below. Also, the 2016 SAEP goal to reduce greenhouse gas by 40 percent was based on the current levels at the time and not on the 1990 levels. The BGS Energy Office does not have baselines for the 1st and 3rd goals. We discuss this issue in Objective 1.

Exhibit 3: The Three Primary Goals in the 2022 and 2016 SAEP

2022 SAEP	2016 SAEP
1. Reduce total energy consumption by 40 percent by 2025, and by 50 percent by 2035.	1. Reduce total energy consumption by 20 percent by 2025, and by 25 percent by 2035
2. Meet 35 percent of the remaining energy needs from renewable sources by 2025, and 45 percent by 2035.	2. Meet 35 percent of the remaining energy needs from renewable sources by 2025, and 45 percent by 2035
3. 40 percent reduction of greenhouse gas emissions below 1990 levels by 2030.	3. 40 percent reduction of greenhouse gas emissions below current levels by 2030.

Neither the 2016 nor the 2022 SAEP goals align with the five percent annual energy consumption reduction that the Legislature required in [Act 40 \(2011\)](#). We discuss this issue in the Other Matters section of this report.

State Energy Management Program (SEMP)

In 2014, the Legislature created the SEMP. It was intended to be a mechanism to implement the part of Act 40 (2011), which called for a five percent annual reduction in energy consumption by State government. The SEMP focuses on energy consumed at State buildings and facilities. This includes employing energy efficiency improvements to conserve energy, as well as the use of renewable energy. The SEMP is implemented through two revolving funds: (1) the State Energy Revolving Fund, and (2) the State Resource Management Revolving Fund. These funds are available to all State entities responsible for the operations and maintenance of state buildings. The annual repayment

amount due for these loans is set at the annual energy cost savings expected to be achieved from the projects.

State Energy Revolving Fund (SERF)

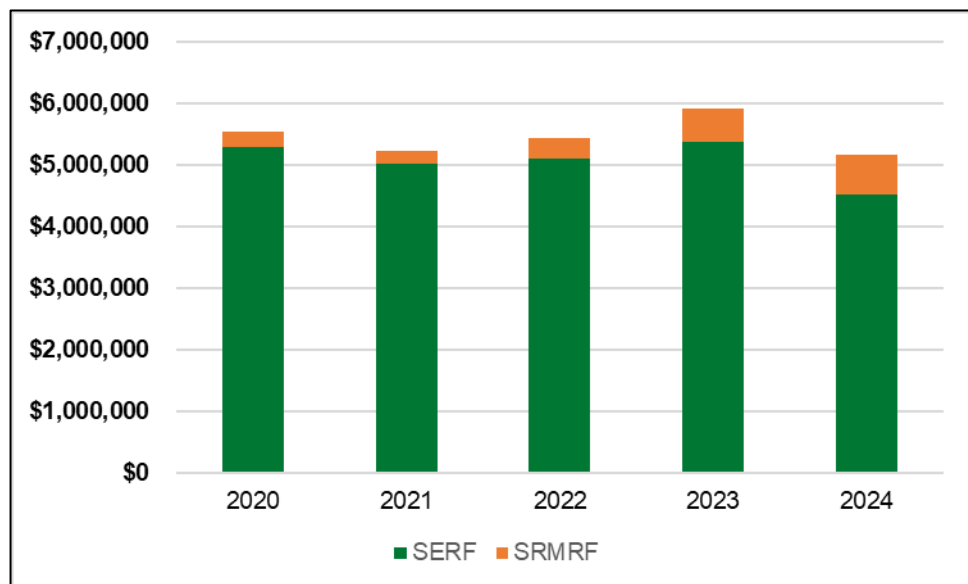
The SERF is an \$8 million revolving fund that is overseen by the Commissioner of BGS and the State Treasurer. This fund can lend money to building owners for energy efficiency projects in buildings, as well as for renewable energy, where the savings exceed the project cost. The recipients must also pay a one-time two percent administrative fee and an annual two percent interest rate. To date, BGS has been the primary recipient of these loans.

State Resource Management Revolving Fund (SRMRF)

The SRMRF is a \$1.5 million revolving fund administered by the Commissioner of BGS. BGS can loan money from this fund to implement measures to reduce energy consumption in its buildings. Any projects that use this fund must generate a benefit that exceeds the project cost. BGS starts collecting on the loan once the project is complete and charges a .5 percent administrative charge in addition to the loan amount.

Exhibit 4 below shows the amount SERF and SRMRF funds BGS reported were available for use at the end of fiscal years 2020 through 2024.

Exhibit 4: SERF and SRMRF Funds Available at Fiscal Year End



Efficiency Vermont (EVT)

[In 2015](#), the Legislature required that Efficiency Vermont provide support to the program's efforts for creating energy efficiency and conservation measures in State buildings. Efficiency Vermont is expected to assess the cost and energy savings for many of the SEMP's efficiency projects. SEMP projects that do not fall under the purview of Efficiency Vermont are those that involve renewable energy or fall under the purview of the State's two other energy efficiency utilities, Burlington Electric Department and Vermont Gas Systems.

An example of a project, validated by EVT, that will save the State significantly more than it cost over its useful lifetime was a lighting upgrade project at the Rutland Parking Garage, as shown in Exhibit 5.

Exhibit 5: Lifetime Savings from a Rutland Parking Garage Lighting Project

Project Cost & Savings	Total
Project Cost	\$79,640
EVT Validated Lifetime Savings	\$414,457
Savings in Excess of Cost	\$334,817
Return on Investment	420%

Objective 1: Evaluate How the State Is Measuring State Government's Progress in Meeting the SAEP Goals

BGS is not measuring the State government's progress in meeting the goals of the SAEP, which include reducing energy consumption and greenhouse gas emissions. Therefore, the State does not know whether it is on track to meet these goals. BGS cannot reliably report on progress towards achieving the goals of the SAEP because: (1) they have not established a system to capture all State-owned building energy use; (2) they do not have documented baselines against which to measure progress; (3) they have not implemented a system to capture the amount of energy used in leased

building spaces; and (4) they have not implemented a system to accurately capture the quantity of transportation fuels used by State employees.

BGS Is Not Measuring and Reporting on Progress Towards the SAEP Goals

Vermont law, [3 V.S.A. § 2291\(f\)](#), requires the BGS Commissioner to biennially report to the Secretary of Administration on the implementation of the SAEP. However, BGS has not done so. Nor is BGS tracking the State's progress towards achieving the goals outlined in the SAEP, which include reducing energy consumption and greenhouse gas emissions. Therefore, the State does not know how it is progressing towards meeting the SAEP's primary goals. Reducing energy consumption not only has environmental benefits, but also saves taxpayers money when State government purchases less energy.

The last time BGS reported any information on energy consumption by State government was in the [2022 SAEP](#). The following sections discuss why BGS cannot reliably report on the State's progress towards achieving the SAEP goals.

BGS Does Not Accurately Capture the Quantity of Energy Used in State-owned Buildings

BGS pays the energy and utility bills for the buildings it controls, except for correctional facilities—Department of Corrections pays those. However, BGS does not control all the State buildings—other State entities also control their buildings. For example, the Agency of Transportation owns 1,403,897 million square feet of building space among 424 buildings, according to BGS's [2025 Space Book](#). BGS does not see the energy bills that other State entities pay because it has not established a system to capture energy consumption data from those bills.

The 2022 SAEP mentions that the energy data used in that plan were derived from aggregated government-wide energy expenditures, which have been converted to units of energy using average electricity costs, average gasoline prices at the pump, and state fuel contract pricing. In [our 2015 audit report on the SAEP](#), we identified this as an issue. We noted that, according to the EPA, using the dollar amount spent on a type of fuel is fundamentally prone to errors and is the least accurate method of determining fuel use. As such, the EPA does not recommend that method be used to report energy consumed. It has been 10 years since our 2015 audit, and no changes have been made.

BGS intended to have Energy Star Portfolio Manager as the system to record energy use for every State entity that controls buildings, which includes the quantity consumed by energy type. Indeed, the [2022 SAEP](#) contains a recommendation that State agencies use Energy Star Portfolio Manager. This system allows users to input their monthly energy usage for tracking. However, there is no evidence that BGS ever requested that the Secretary of the Agency of Administration require all State entities to use Energy Star Portfolio Manager. Currently, only BGS is using that system. BGS controls approximately 60 percent of state-owned space in the 2025 Space Book. Therefore, the information in Energy Star Portfolio Manager does not contain building energy consumption information for the entire State government.

Furthermore, while Vermont law, [29 V.S.A. §165\(e\)](#), requires the BGS Commissioner to maintain an inventory of all State-owned buildings, the BGS Energy Office did not utilize such an inventory. Therefore, the BGS Energy Office did not know the entire universe of State buildings that consumed energy and their corresponding consumption levels.

Vermont State Government, one of the largest consumers of energy in the state, is often looked upon by businesses, communities and residents to operate as a model for those to emulate. In order to rise to the fiscal and ecological high standards set before us, we must track our current usage to establish benchmarks for future conservation monitoring. Hence, we need a reporting structure and process in the General Ledger system that accurately records payments made to third party vendors for all of our energy costs as well as consumed quantities.

- *Quote from a [State memo regarding how to code energy invoices in the State's accounting system](#)*

The State's accounting system, VISION, also has the capacity to record and report on the amount of energy used. However, the State is not using that functionality. While a [Department of Finance and Management memo about how to record energy costs in the State's accounting system](#) indicates the importance of accurately recording quantities consumed, officials at the Department of Finance and Management told us that they do not *require* State entities to record quantities consumed in the State's accounting system.

BGS Does Not Have the Baseline Number to Measure Progress Against

The following two goals from the SAEP require baselines to measure progress against.

- Reduce total energy consumption by 40 percent by 2025 and by 50 percent by 2035.

- 40 percent reduction of greenhouse gas emissions below 1990 levels by 2030.

However, the SAEP does not indicate what those baselines are, and the BGS Energy Office could not provide us with those baselines. Furthermore, for the goal of reducing greenhouse gas emissions below the 1990 levels, there is no indication that BGS ever knew what the 1990 levels were. Vermont has [estimates for the level of all human-caused greenhouse gas emissions in 1990](#), but those estimates do not attribute how much of that is a result of the State government.

BGS Has Not Been Tracking Energy Use in Leased Space

[Vermont Law](#) requires the State to not only track energy consumption in State-owned buildings, but also in leased buildings. Indeed, the 2022 SAEP states: “To meet the SAEP's goals for reductions in total energy consumption, state agencies must improve electric and heating efficiency within state buildings (especially those that are state-owned, but also those that are leased)...”

According to [BGS's 2025 Space Book](#), 12 percent of all building space is leased, as shown in Exhibit 6 below. BGS pays the energy costs in these spaces either directly or as part of the leases.

In 2014, BGS developed [procedures to record energy use in leased space](#) that was greater than 5,000 square feet and where the term of the lease was at least five years. However, **BGS never implemented those procedures, and thus does not know the amount of energy that State government uses in leased spaces.**

Exhibit 6: State-owned Versus Leased Space

Building Space	Gross Square Footage (SF)	Percent of Total SF
State-owned	7,030,476	88%
State-leased	932,994	12%
Total	7,963,470	100%

The 2022 SAEP contains energy consumption data for several years preceding that plan. It notes that the data omits energy consumption associated with leased spaces. As a result, BGS may be omitting a significant amount of State government energy consumption.

BGS Has Not Implemented a System to Capture the Quantity of Transportation Fuels Used by State Employees

In addition to its failure to accurately track energy usage in State buildings, including leased space, **BGS has also not implemented a way to accurately track gasoline and diesel use in State vehicles.** When BGS reported the State's diesel and gasoline consumption in the 2022 SAEP from fiscal years 2015 through 2020, they did so by using gasoline and diesel expenditures, which they then converted to units of energy using average gasoline prices at the pump and state fuel contract pricing.

Vermont law, [Act 40 \(2011\)](#), requires that transportation fuel used by employees be tracked. Additionally, the SAEP discusses the importance of reducing transportation fuels to meet the SAEP energy and carbon emission reduction goals.

The State has a contract with WEX Bank to provide fuel card services to purchase gasoline and diesel at fueling stations. This service allows the State to identify the gallons of gasoline and diesel purchased by the State. While BGS recognizes that this service provides enough information to track fuel consumption and associated greenhouse gas emissions, BGS did not use it when they reported gasoline and diesel consumption information in the 2022 SAEP.

Objective 2: Determine Whether the BGS Energy Office Selects the Most Cost-Efficient Energy Savings Projects for Buildings

BGS generally selects projects that meet the payback requirements, although questionable loan application practices allowed two projects with negative payback to proceed. BGS may be missing opportunities to identify and generate energy and cost savings because it only contracts for energy audits on buildings it controls, not other State-owned buildings, and BGS does not consider leased space for energy efficiency projects. Also, BGS has completed a very modest number of projects in the last few years, due primarily to a lack of staff to oversee the projects.

BGS Generally Selects Projects That Meet the Payback Requirements but Questionable Loan Application Practices Open the Door for Waste

Both statute and BGS guidelines state that all projects must have a positive return on investment. BGS guidelines also state that projects with a shorter

payback period will be considered first. The Treasurer permits SERF funding only for projects with a payback of less than 15 years (this was recently changed from a 7-year payback requirement), while there is no specific payback limit for SRMRF funding.

One of the ways BGS identifies potential projects is from energy audits. These are audits by independent consultants, who make recommendations on how to reduce a building's energy consumption. These audits provide cost estimates and annual cost savings but do not provide lifetime savings—a critical component in determining whether—and to what extent—the project will have a positive return on investment. Energy audits are not the only way BGS identifies potential energy efficiency projects: BGS may also identify projects internally without the benefit of an energy audit. For example, the Design & Construction Division of BGS may contact the Energy Office if one of their projects could have an energy component; in that case, EVT would calculate the savings.

Regardless of how BGS identifies a potential energy efficiency project, when the decision is made to proceed with a project, these estimates are refined by the applicable energy efficiency utility (e.g., Efficiency Vermont).

We identified one project, a lighting project at the Barre Courthouse, where the State did not receive a positive return on investment. This project cost \$72,749 more than BGS reported it would save over the useful life of the project. Efficiency Vermont's estimated lifetime savings for this project were even less than what BGS reported: using EVT's lifetime savings, this project cost \$143,170 more than it will ever save. This project was "bundled" with a lighting upgrade in the Rutland parking garage into a single SERF loan, so that the aggregate had a positive return and a payback period within the SERF limit.

Vermont law permits SEMP funding only for projects that generate overall financial savings. However, BGS SEMP guidelines state that projects can be bundled together to help reduce the overall payback period. This creates a risk that the State may move forward with projects that cost the State more than they will save, which violates Vermont law and wastes taxpayers' money—as happened with the Barre Courthouse project.

One Other Project BGS Selected Cost Significantly More than It Saved

BGS reported that a lighting upgrade project completed at 133 State Street in Montpelier will save \$303,174 more than it cost. However, BGS misstated both the project's cost and lifetime savings when reporting the results of this project to the Legislature, and **this project actually cost \$550,686 more**

than it will save. BGS had underreported the total project cost because BGS did not include project costs paid for with non-SEMP funds.

BGS also used incorrect savings information in the SERF loan application, as the project scope had changed from what was in the application. The loan application also did not provide information about project costs expected to be paid for with non-SEMP maintenance funds.

BGS had changed the original scope of the lighting project from a retrofit (which costs less) to a complete replacement (which costs more). A BGS official said that the light fixtures were near their end of life, and BGS did not want to retrofit lights where the fixtures would soon need to be replaced. That is why BGS supplemented the project with maintenance funding not tied to the SEMP program.

BGS's application for the SERF funding also included expected lifetime savings from work on the hot water system and snow melt sensors, in addition to the lighting upgrade. However, according to other BGS documents, the project was solely for the lighting upgrade, and that was the only upgrade BGS installed. Based on the loan application, it is unclear whether BGS knew that the project would cost more than it would save when they applied for those funds.

BGS's SEMP standard operating procedures allow for the use of non-SEMP funds for projects, but do not address whether the requirement for a positive return on investment applies to the entire investment, including the portion paid for by non-SEMP funds.

BGS Only Contracts for Energy Audits on Buildings It Controls

Vermont Law, [29 V.S.A. §157\(a\)\(3\)](#) requires BGS to conduct investment-grade audits to develop a pipeline of energy efficiency and conservation measures to be implemented through the SEMP. This requirement applies to all State buildings, but BGS only contracts for energy audits on buildings it controls.

BGS did not have a complete list of State buildings during our audit.

Before 2025, the BGS Space Book listed only buildings controlled by BGS and rest areas maintained by BGS. For the 2025 edition, BGS added buildings controlled by the Agency of Commerce & Community Development, the Agency of Transportation, the Agency of Natural Resources, and the Military Department. This is an improvement, but the 2025 Space Book remains incomplete since it does not include, for example, the Veterans' Home and the Department of Labor building in Montpelier.

Without a complete list of State buildings, BGS cannot ensure that it identifies the appropriate candidates for energy audits. By not conducting energy audits on buildings controlled by other State entities, BGS may be missing opportunities to identify and generate energy and cost savings.

Energy Efficiency Project Selection Process Does Not Include Leased Space

[Act 178 \(2014\)](#) requires BGS to develop criteria and guidelines to evaluate and incorporate, where appropriate, energy efficiency measures in leased spaces. Accordingly, BGS developed [operational procedures](#) regarding how they will track energy usage for leased space that is over 5,000 square feet and when the term of the lease is longer than 5 years. The procedures also state how BGS is to use that data to identify leased properties that may be candidates for energy efficiency projects. However, BGS has not implemented these procedures.

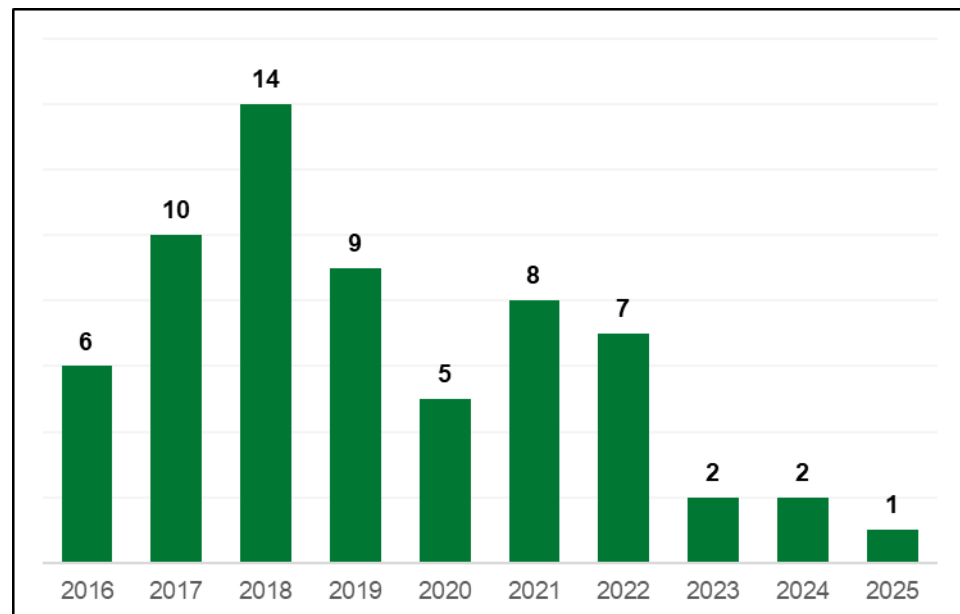
Furthermore, BGS does not perform energy audits or energy efficiency projects on leased space. However, BGS reports it has directed landlords to energy efficiency opportunities available through Efficiency Vermont. According to BGS, SERF and SRMRF funding is not to be used on leased space, and state major maintenance facility condition assessment funds are not to be spent on energy audits of leased space as these sources of funding are appropriated to state-owned facilities. BGS was unable to provide any documentary evidence of these instructions.

Leased space is 12 percent of the State's building space (see Exhibit 5). Some leases require the State to pay for utilities. By ignoring these properties, BGS remains unaware of opportunities to reduce energy consumption and to save taxpayer money.

Extremely Limited Number of Energy Efficiency Projects Conducted in Recent Years

The number of SEMP projects completed each year varies, but BGS normally completes five or more projects per year. However, for the last three fiscal years BGS has only completed one to two projects per year, as shown in Exhibit 7.

Exhibit 7: Number of Energy Efficiency Projects Completed by Fiscal Year



BGS Has Plenty of Projects to Choose From, but is Foregoing Potential Savings by Not Doing Them

The small number of projects completed is not due to a lack of potential projects in the pipeline: BGS provided us with 51 energy audits completed between 2016 and 2024. However, BGS has only completed 15 projects that were based on these energy audits. BGS estimated that these 15 projects in total will save the State \$2.9 million more than they cost over their useful life. Revolving fund loans have been approved for another 11 projects, that BGS expects to generate net savings of \$577,606.

It is unclear the potential lifetime savings BGS has been forgoing for Vermont taxpayers by completing so few energy efficiency projects because the energy audits do not include information on potential lifetime savings. However, the energy audits do include estimated annual savings. In some cases, there are specific reasons for not implementing recommendations, such as the uncertain future of some flood-prone buildings in Montpelier. While construction cost increases and loan repayment requirements had previously made accessing funding difficult, currently, BGS acknowledges that the primary constraint on its ability to implement projects is staffing capacity.

There are two project manager positions dedicated to energy projects. These are the personnel that develop the scope of a project and coordinate the work. One of these positions has been vacant since 2021, and both have been vacant since December 2024. EVT funds these positions when filled, so there

is no financial reason for the vacancies. BGS stated that it had difficulty finding candidates for these positions, but BGS did not advertise continuously to fill the positions.

By implementing only a small number of projects, BGS achieves only a small amount of energy and cost savings. BGS has a pipeline of energy efficiency projects that are expected to save the State money, and the sooner BGS implements those projects, the sooner those savings will be realized.

Objective 3: Determine Whether the BGS Energy Office Assessed the Outcomes of Energy Savings Projects for Buildings

The BGS Energy Office did not reliably assess outcomes of energy savings projects for buildings. A comparison of lifetime savings data maintained by BGS and EVT revealed that they differed by 30 percent or more for 9 of the 13 projects we reviewed. In all but one instance, BGS recorded greater lifetime savings than EVT. This indicates that BGS did not accurately assess project outcomes because they did not finalize or reconcile lifetime savings data with EVT. Consequently, BGS reported unfinalized project data in the State Energy Management Program Annual Report, overstating annual and lifetime dollar and energy savings to the State Legislature and Vermont taxpayers.

BGS Did Not Validate Savings from Energy Efficiency Projects

The Memorandum of Understanding, signed in 2016 by BGS and EVT, defines the development and implementation of the State Energy Management Program. The MOU outlines the roles and responsibilities of BGS and EVT during the different phases of energy efficiency projects that aim to achieve a minimum annual electrical and thermal energy savings.

During the Project Execution and Management phase, EVT prepares and submits an Incentive Agreement to BGS for projects selected and approved for implementation. According to the MOU, the agreement will contain project estimates such as the estimated cost of efficiency improvements, EVT incentive, first-year savings, payback period, average lifetime of efficiency improvements, and the rate of return on investment.

Our review of 14 incentive agreements associated with 13 projects completed between fiscal years 2018 and 2025 revealed that only 6 of the 14 agreements contained all the data elements specified by the MOU. All incentive agreements contained the estimated annual savings. However, six incentive agreements

did not identify the estimated average lifetime of the efficiency improvements. Both data elements are necessary for calculating the lifetime savings of a project. Without these variables, BGS cannot assure that the expected lifetime savings recorded in their system match EVT's expected savings.

The Project Completion and Closeout Phase requires EVT to finalize saving estimates by performing a verification inspection to confirm the proper installation of energy efficiency measures. Although EVT holds project close-out discussions with EVT after the completion of the inspection, BGS's process does not include obtaining validated savings from EVT. After completion of the verification inspection, EVT shares its finalized savings data with BGS only upon request. Without obtaining the finalized data from EVT, BGS has no assurance that its savings match the amount EVT validated.

Vermont law requires BGS and EVT to jointly provide an annual SEMP to the State Legislature that contains the savings achieved by SEMP projects. Our analysis of lifetime dollar savings recorded by BGS and EVT indicated that BGS has been reporting inaccurate data to the Legislature and Vermont taxpayers and has significantly overstated the amount of money saved. As displayed in Exhibit 8, the lifetime dollar savings reported by BGS exceeded the lifetime dollar savings recorded by EVT by 71 percent after the deduction of BGS maintenance savings.¹ This disparity stems from the failure of BGS to finalize annual and lifetime savings data with EVT after the verification inspection. **In total, BGS overstated lifetime dollar savings by \$1,666,511 when compared to the lifetime savings EVT recorded for the projects reviewed, which is an 83 percent overstatement of the return on investments for these projects.**

¹ BGS sometimes records maintenance savings that result from reduced maintenance costs, such as the less frequent replacement of lightbulbs, whereas EVT does not. To facilitate a more accurate comparison of BGS and EVT savings data, we deducted maintenance savings from lifetime savings reported by BGS.

Exhibit 8: Amount by which BGS Overstated Lifetime Dollar Savings Compared to EVT's Validated Savings for Selected Projects

Project Name	BGS Lifetime \$ Savings Less Maintenance Savings	EVT Lifetime \$ Savings	Overstatement of \$ Savings	Overstatement Percent
133 State Street, Montpelier	\$802,174	\$280,136	\$522,038	186%
Springfield State Office Building	\$1,016,955	\$594,218	\$422,737	71%
Middlebury District Courthouse	\$503,576	\$147,781	\$355,795	241%
Brattleboro Courthouse	\$178,409	\$44,285	\$134,124	303%
Newport State Office Building	\$289,728	\$219,357	\$70,370	32%
Saint Johnsbury Courthouse	\$231,305	\$167,636	\$63,669	38%
Rutland Parking Garage	\$470,570	\$414,457	\$56,113	14%
Ed Weed & Salisbury Fish Culture	\$432,971	\$413,159	\$19,812	5%
White River Junction Courthouse	\$15,348	\$5,134	\$10,214	199%
Brattleboro State Office Building	\$21,269	\$11,895	\$9,374	79%
Rutland Parking Garage Tunnel	\$16,763	\$9,415	\$7,348	78%
Pittsford Firehouse	\$29,375	\$28,648	\$727	3%
Royalton Police Barracks	\$17,968	\$23,779	- \$5,810	-24%
Total	\$4,026,410	\$2,359,900	\$1,666,511	71%

Additionally, when using EVT's lifetime savings, 4 of the 13 projects in Exhibit 8 cost slightly more than they were expected to save. The costs exceeding lifetime savings ranged from \$1,230 to \$19,812, except for the 133 State Street lighting project previously mentioned in the Objective 2 section of this report. That project's cost exceeded the lifetime savings by \$550,686.

In addition to overstating lifetime dollar savings, BGS claimed annual and lifetime dollar savings for the same project twice. As shown in Exhibit 9, BGS reported annual and lifetime savings, to include maintenance savings, for the Middlebury District Courthouse project in both the 2019 and 2021 SEMP Reports.

Exhibit 9: Reported Savings for the Mahady Courthouse in Middlebury

Source	SEMP Report Annual \$ Savings with Maintenance Savings Included	SEMP Report Lifetime \$ Savings with Maintenance Savings Included
2019 SEMP Report	\$36,071	\$544,065
2021 SEMP Report	\$36,071	\$541,076

BGS also reports annual kilowatt-hour (kWh) savings to the Legislature and Vermont taxpayers. The overall kWh savings BGS reported for the projects in Exhibit 8 save 1,408,611 kWh annually. However, according to EVT data the annual savings were 1,259,405 kWh, which is 149,206 kWh (12 percent) less than BGS reported the projects save.

Other Matters

The SAEP Goals Do Not Align with the Energy Reduction Requirements of Act 40 (2011)

The Legislature, through [Act 40 \(2011\)](#), required all state entities to reduce their energy consumption by 5 percent annually, including fuel used by their employees to travel to and from meetings during the workday. This means that by 2025, the State would have had to reduce its total energy consumption by 50 percent, and by 70 percent by 2035.

However, the 2016 SAEP notes that the magnitude of these reductions is likely not feasible. Instead, the 2016 SAEP proposed a goal of 20 percent energy reduction in energy consumption by 2025. While the 2022 SAEP increased it to a 40 percent reduction by 2025, this goal still falls short of the Act 40 (2011) goal.

BGS did not provide any evidence that they had any conversations with the Legislature regarding why the SAEP goals do not align with the 5 percent annual energy consumption reduction outlined in Act 40 (2011).

The MOU Between BGS and EVT Expired Six Years Ago

The MOU between BGS and EVT expired in 2019. The Legislature has twice required BGS and EVT to execute a new or amended MOU: Act 72 (2019) and

Act 172 (2022). However, BGS and EVT have not done so and remain in contravention of the law.

BGS prepared an updated MOU in 2022 that was rejected by EVT because it included solar measures that EVT is not permitted to work on. EVT officials said they proposed a different MOU in 2023, but that was never signed by the BGS Commissioner or EVT Director.

BGS is Overstating Annual Target Performance

In the annual SEMP report, BGS reports the results of its activities. This includes the annual savings generated by projects completed in the year, which addresses their target to generate \$150,000 of new annual savings each year. The total “First-year savings” reported includes solar net metering savings that include all annual savings, not just new savings. The “First-year savings” number reported is therefore an overstatement.

The orange cells in Exhibit 10 below show that after removing the savings from solar net metering, **the SEMP did not achieve its target of \$150,000 in new annual savings for the majority of the fiscal years from 2017 through 2025**. While the SEMP reports show that the program met its target in 6 of the 9 years, after removing the solar net metering numbers, the target was met in only 3 of the 9 years, based only on the numbers in the annual reports (as previously noted, BGS reported greater savings than EVT had validated in 12 of the 13 projects that we reviewed). At times, solar net metering accounts for more than 50 percent of the savings reported in the annual SEMP reports.

Exhibit 10: Impact of Inclusion of Solar Net Metering on “First-Year Savings”

Report Year	Total First-year \$ Savings Reported	\$ Savings - Solar Net Metering	First-year \$ Savings Excluding Solar Net Metering
FY 2017	\$151,184	\$54,167	\$97,017
FY 2018	\$397,947	\$72,629	\$325,318
FY 2019	\$227,482	\$67,910	\$159,572
FY 2020	\$161,226	\$64,809	\$96,417
FY 2021	\$158,367	\$75,809	\$82,558
FY 2022	\$128,402	\$76,251	\$52,151
FY 2023	\$134,695	\$73,988	\$60,707
FY 2024	\$219,839	\$69,069	\$150,770
FY 2025	\$111,094	\$69,151	\$41,943

The State Energy Program Manager explained that they included solar net metering as part of the annual savings because this is what his predecessor did, and therefore, he continued to do so.

Conclusions

The numerous findings outlined in this report demonstrate BGS's failure to execute its SAEP and SEMP responsibilities. BGS is not measuring State government's progress in meeting the SAEP goals and does not have baselines to measure performance against for 2 of the 3 goals. BGS also does not accurately capture the quantity of energy used by the State government, an issue we previously identified in our 2015 audit.

Regarding the SEMP, BGS generally selected energy efficiency projects that met the payback requirements, but questionable loan application practices open the door for waste. For example, the practices allow for the bundling of projects that do not save the State money with those that do. This opens the door for waste, because it potentially allows the State to fund a project that will cost more money than it will save over its useful life, which happened for one project. Furthermore, another project that cost more than it will save was reported as being cost-effective after BGS understated the cost and overstated the savings.

Additionally, BGS may be missing opportunities to identify and generate cost savings from the SEMP because it did not have a complete list of all State buildings, had not contracted for energy audits in State buildings other than those BGS controlled, and did not consider leased space. Lastly, BGS only completed five projects in the last three years and did not achieve its SEMP target of generating \$150,000 in new annual savings in six of the last nine years.

Moreover, BGS did not obtain validated project savings from EVT. A comparison of lifetime dollar savings that BGS reported to the Legislature to lifetime dollar savings recorded by EVT found that BGS's savings exceeded the amount EVT recorded by more than 30 percent for 9 of the 13 projects we reviewed. In total, BGS's lifetime dollar savings exceeded EVT's savings by \$1,666,511 for these projects.

Recommendations

We make the following recommendations in Exhibit 11 to the Commissioner of BGS to help the Department in its mission to reduce energy consumption and greenhouse gas emissions, which ultimately benefits Vermont taxpayers.

Exhibit 11: Recommendations and Related Issues

Recommendation	Report Pages	Issue
1. Report biennially to the Secretary of Administration on the implementation of the SAEP and the progress towards its goals.	8	Vermont law, 3 V.S.A. § 2291(f), requires the BGS Commissioner to biennially report to the Secretary of Administration on the implementation of the SAEP. However, BGS has not done so.
2. Develop and implement an accounting system that captures all State building energy use, including leased buildings.	8-10	BGS does not see the energy bills that other State entities pay and has not established a system to capture energy consumption data from those bills.
3. Develop documented baselines for the SAEP goals.	9-10	The SAEP does not indicate what those baselines are for two of its goals, and the BGS Energy Office could not tell us what the baselines are for those goals.
4. Develop and implement a system to capture the amount of transportation fuels used by State employees.	11	Similar to how the BGS Energy Office has not implemented a way to accurately track energy usage in all State buildings, including leased space, BGS has also not implemented a way to accurately track gasoline and diesel use in State vehicles.
5. Amend the SEMP guidelines to clarify that even when projects are bundled to reduce the average payback period, every project and every measure must still comply with the statutory requirement to achieve an overall financial savings.	11-12	A project in Barre with a negative return on investment was approved because it was bundled with another project in Rutland that had a more favorable return on investment, hiding the fact that the Barre project cost more money than it saved.
6. Amend the SEMP standard operating procedure to clarify that when SERF or SRMRF is combined with other funding sources, the entire investment must generate a positive return.	12-13	A lighting upgrade project at 133 State Street in Montpelier cost \$550,687 more than its expected lifetime savings. BGS used both SEMP and non-SEMP funds for this project. BGS's SEMP standard operating procedures allow for the use of non-SEMP funds for projects, but do not address whether the requirement for a positive return on investment applies to the entire investment, including the portion paid for by non-SEMP funds.

Recommendation	Report Pages	Issue
7. Contract for energy audits on buildings controlled by all State entities, not just BGS-controlled buildings.	13-14	BGS does not contract for energy audits for buildings controlled by other State entities. Vermont law requires BGS to conduct investment-grade audits to develop a pipeline of energy efficiency and conservation measures to be implemented through the SEMP. This requirement applies to all State buildings, but BGS does not contract for energy audits in buildings not under its control.
8. Require energy auditors to include in their reports estimates of lifetime savings as well as annual savings.	12 & 15	Lifetime savings are a critical component in determining whether a project will have a positive return on investment.
9. Implement the operations procedures for the use of energy efficiency measures, thermal energy conservation measures, and renewable energy resources in leased space.	14	State law requires BGS to develop criteria and guidelines to reduce energy consumption for leased space. BGS developed procedures that state how BGS is to use that data to identify leased properties that may be candidates for energy efficiency projects. However, BGS has not implemented those procedures.
10. Implement more energy efficiency projects to attain at least the first-year savings target.	14-16 & 20-21	BGS has completed an extremely limited number of energy efficiency projects in recent years. BGS has not achieved its SEMP goal of \$150,000 in new annual savings for the majority of the fiscal years from 2017 through 2025.
11. Regularly finalize and reconcile energy savings data with corresponding data maintained by the efficiency utilities and ensure EVT verifies the accuracy of energy savings data prior to issuing public reports to the Legislature.	16-19	BGS does not regularly update annual dollar savings with EVT-validated data after the completion of a verification inspection, resulting in the reporting of erroneous and misleading data.
12. Align the SAEP goals with the goals outlined in Act 40 (2011) or ask the Legislature to revise the statute.	19	The Legislature, through Act 40 (2011), required all state entities to reduce their energy consumption by 5 percent annually, including fuel used by their employees to travel to and from meetings during the workday. This means that by 2025, the State would have had to reduce its total energy consumption by 50 percent, and by 70 percent by 2035.
13. Execute a new or amended MOU with EVT.	19-20	The MOU between BGS and EVT expired in 2019. The Legislature has twice required BGS and EVT to execute a new or amended MOU: Act 72 (2019) and Act 172 (2022). However, BGS and EVT have not done so and remain in contravention of the law.

Recommendation	Report Pages	Issue
14. Do not include ongoing savings from solar net metering savings when calculating the annual performance for the SEMP.	20-21	In the annual SEMP report, BGS reports the results of its activities. This includes the annual savings generated by projects completed in the year, which addresses the requirement to generate \$150,000 of new annual savings each year. The total “First-year savings” reported includes solar net metering savings that include all annual savings, not just new savings. The “First-year savings” number reported is therefore an overstatement.

Management’s Comments and Our Evaluation

On January 14, 2026, the Commissioner of the Department of Buildings and General Services provided written comments on a draft of this report. These comments are reprinted in Appendix V. Our evaluation of these comments is found in Appendix VI.

Appendix I

Scope and Methodology

For all objectives, we reviewed applicable Acts and statutes, including but not limited to 3 V.S.A. §2291, 10 V.S.A. §578, 29 V.S.A. chapter 5, 2011 Act 40, 2014 Act 178, 2015 Act 58, 2019 Act 72, 2022 Act 172, and 2024 Act 148. We reviewed annual SEMP reports, presentations to the Legislature, the BGS Space Book, and the VTrans Space Book. We also interviewed officials in the BGS Energy Office .

To address the first objective, we reviewed the 2016 and 2022 SAEP, the 2020 BGS Agency Energy Implementation Plan, and the contract between BGS and WEX Bank for universal fleet card services, including a card management system. We reviewed annual energy reports from the Department of Public Service to determine whether they contained information about the State's progress towards meeting the SAEP goals. We reviewed the Vermont Greenhouse Gas Emissions Inventory and Forecast from 1990-2022 published by the Agency of Natural Resources to determine whether the 1990 estimates attribute how much greenhouse gas emissions resulted from the State government.

We obtained and reviewed a memo from the Department of Finance and Management about how to code energy expenditures in the State's accounting system and followed up with officials from that Department to determine whether they require State entities to record quantities consumed in the State's accounting system.

We queried the State's accounting system to identify whether that State was using that system to record the quantity of energy consumed. We obtained and reviewed the data BGS used to report energy consumption in the 2022 SAEP. We obtained data from Energy Star Portfolio Manager, but we determined that it did not contain a complete listing of state-owned buildings. Therefore, we did not rely on data from that system for our audit. We reviewed BGS's procedures to record energy use in leased spaces and obtained confirmation from the BGS Energy Office that BGS had not implemented those procedures.

To address the second and third objectives, we reviewed the 2016 MOU between BGS and Efficiency Vermont and a draft MOU from 2022. We also reviewed various BGS procedure documents. We interviewed officials from the energy efficiency utilities (Efficiency Vermont, Burlington Electric Department, and Vermont Gas Systems). We also interviewed officials from the Financial Services Division of the Agency of Administration.

We obtained from BGS copies of energy audits and data from the databases that BGS uses to track energy project costs. We assessed the reliability of the data in those databases and determined that it was not sufficiently reliable

Appendix I

Scope and Methodology

for us to rely on it for audit purposes. We therefore relied on data from other sources for key conclusions.

We compared projects undertaken to the recommendations of energy audits not implemented and sought explanations as to why the recommendations had not been implemented. We calculated the savings that might have been made if projects had been implemented per the energy audits.

We compared information in the SEMP annual reports to that in BGS's databases and in the energy audits. To assess the accuracy of BGS's reporting to the Legislature, we judgmentally selected 13 energy efficiency projects and compared the dollar and kilowatt savings BGS reported to the savings EVT had validated for those projects. We selected these projects because BGS was able to provide us with the EVT incentive agreements for these projects. We limited the results to the projects we reviewed, as they cannot be projected to the entire population of energy efficiency projects.

We determined which internal controls were significant to our audit objectives and analyzed BGS's design and implementation of these controls. In addition, we identified weaknesses in internal controls as a cause of some findings and made recommendations accordingly.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II Abbreviations

BGS	Department of Buildings and General Services
EVT	Efficiency Vermont
kWh	Kilowatt-hour
MOU	Memorandum of Understanding
SAEP	State Agency Energy Plan
SEMP	State Energy Management Program
SERF	State Energy Revolving Fund
SRMRF	State Resource Management Revolving Fund

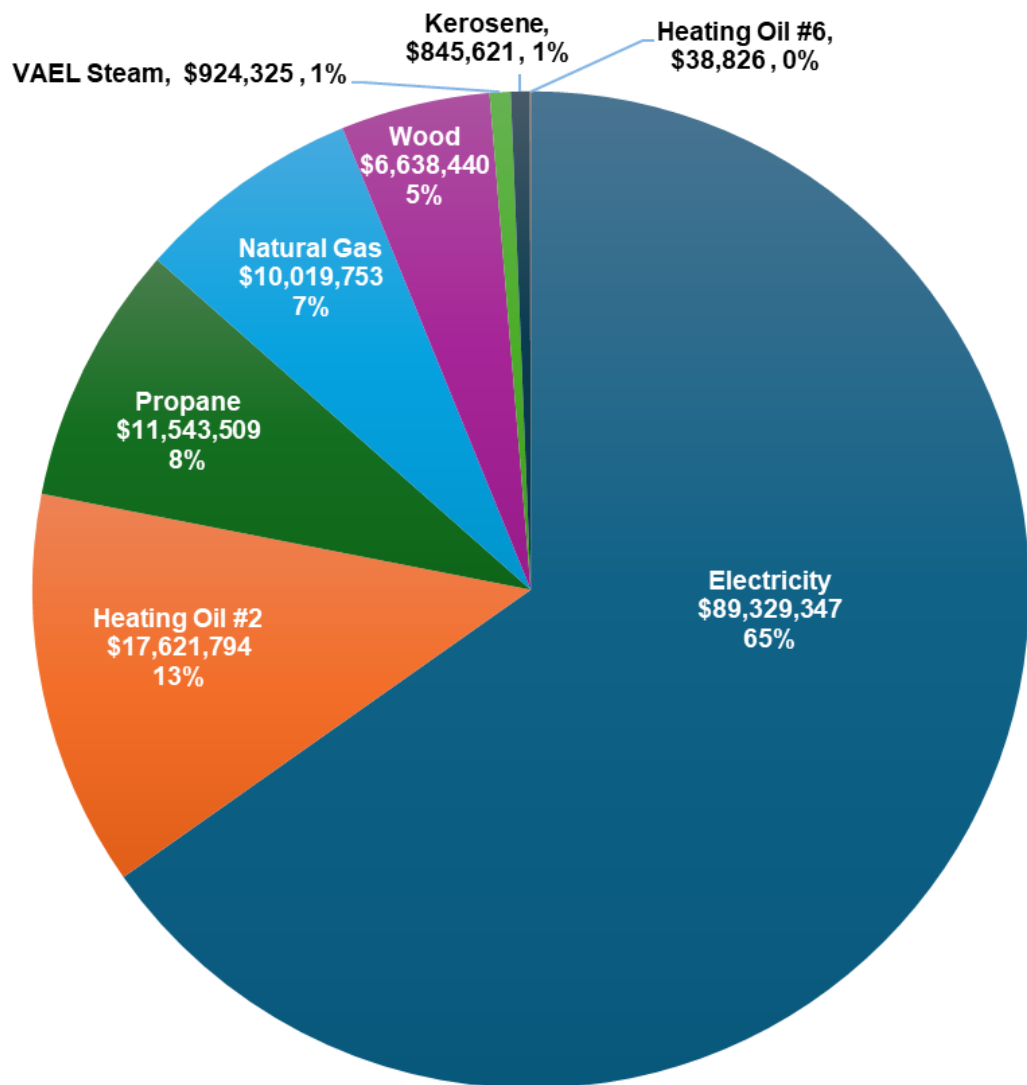
Appendix III

Building Energy Costs Since 2016

The following exhibits show the cost of the most significant energy costs for State buildings from fiscal year 2016 to fiscal year 2025.

Electricity and heating oil #2 account for nearly 80 percent of all State building energy costs from fiscal years 2016 through 2025, as shown in Exhibit 12 below.

Exhibit 12: State Building Energy Costs from Fiscal Years 2016 through 2025



Appendix III

Building Energy Costs Since 2016

The State spent \$89.3 million on electricity and \$17.6 million on heating oil #2 from fiscal years 2016 through 2025. Exhibits 13 and 14 provide further detail on the State's electricity and heating oil #2 expenditures from 2016 through 2025.

Exhibit 13: Electricity Costs from Fiscal Years 2016 through 2025

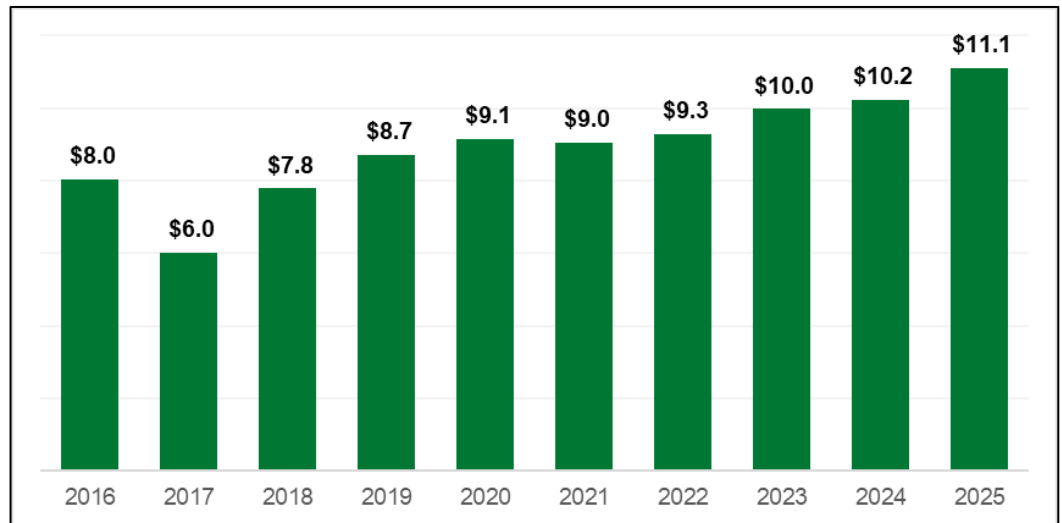
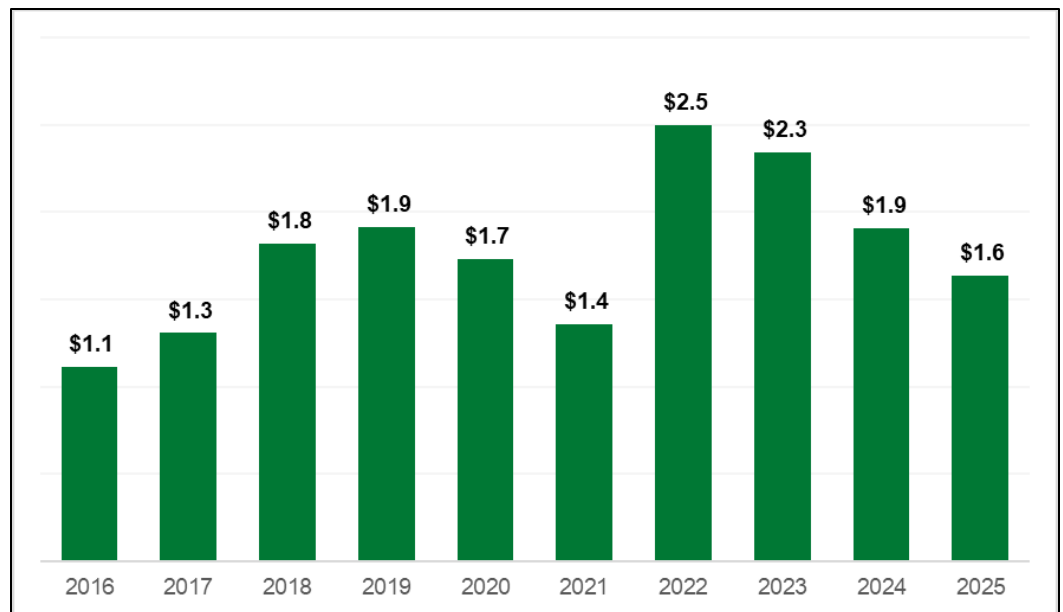


Exhibit 14: Heating Oil #2 Costs from Fiscal Years 2016 through 2025



Appendix IV

Transportation Energy Costs Since 2016

The State spent \$36.3 million on gasoline and \$24.9 million on diesel fuel from fiscal years 2016 through 2025. Exhibits 15 and 16 provide further details on the State's gasoline and diesel expenditures from 2016 through 2025.

Exhibit 15: Gasoline Costs from Fiscal Years 2016 through 2025

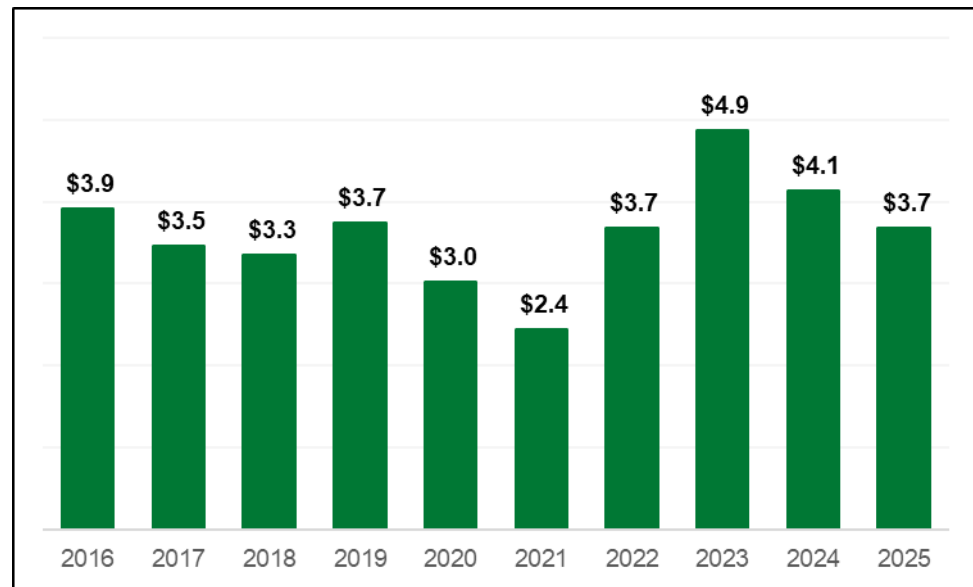
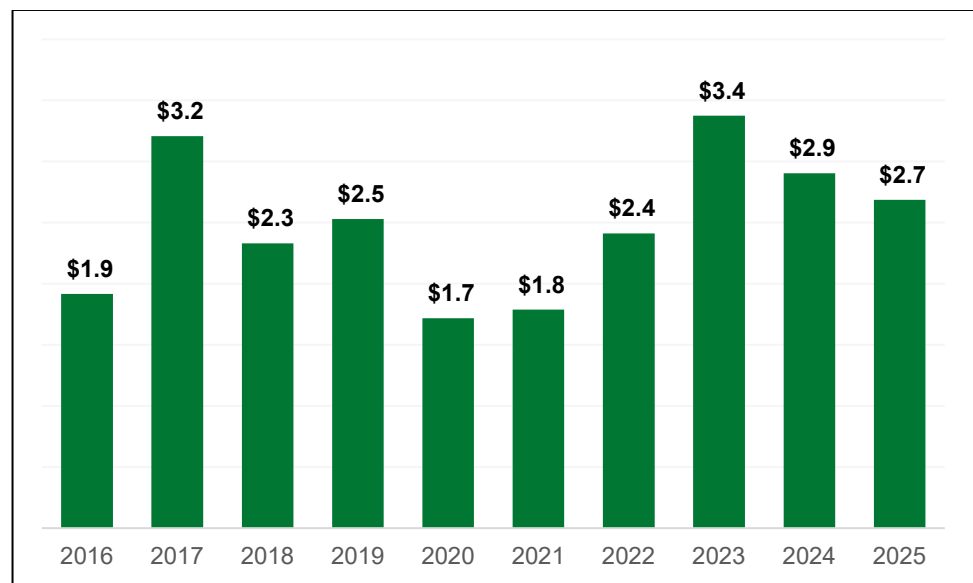


Exhibit 16: Diesel Costs from Fiscal Years 2016 through 2025



Appendix V

Comments from Management

The following is a reprint of management's response to a draft of this report. Our evaluation of these comments is contained in Appendix VI.



Department of Buildings and General Services
Office of the Commissioner
133 State Street, 5th Floor
Montpelier, VT 05633-5801

Agency of Administration

[phone] 802-828-3519
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January 14, 2026

Mr. Douglas R. Hoffer
Vermont State Auditor
Office of the State Auditor
132 State St.
Montpelier, VT 05633-5101

Dear Auditor Hoffer:

This letter serves as the Department of Buildings and General Services' response to the report generated by your office entitled, "*State Agency Energy Plan and the State Energy Management Program, Improvements Needed for Tracking and Reducing State Energy Consumption; BGS Overstated Savings in a Selection of Energy Projects.*"

Thank you for your team's hard work and collaborative approach with the Department in undertaking this review. We found the audit experience and resulting feedback valuable, and it brings into focus areas where we can strengthen our energy program processes, outcomes, and goals.

The Department agrees with nearly all of the report's findings. Our comments on the report's findings and recommendations, and our planned steps and timelines to address deficiencies, are attached for your review.

I appreciate the work of all parties involved in the audit process, and we look forward to improving our program by implementing changes based on the recommendations in your report.

Sincerely,

A handwritten signature in cursive script that reads "Wanda L. Minoli".

Wanda L. Minoli
Commissioner
Department of Building and General Services



Appendix V

Comments from Management



**Department of Buildings and General Services
Office of the Commissioner**

133 State Street, 5th Floor
Montpelier, VT 05633-5801

[phone] 802-828-3519
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Agency of Administration

TO: Douglas R Hoffer, Vermont State Auditor
FROM: Wanda Minoli, Commissioner, Department of Buildings and General Services
DATE: January 14, 2026
SUBJECT: Audit Report, "State Agency Energy Plan and the State Energy Management Program; Changes Needed"

State Auditor's Office Recommendations and Department of Buildings and General Services ("BGS") Responses

Audit Objective 1: Evaluate how the State is measuring State government's progress in meeting the SAEP goals.

Audit Finding: BGS is not measuring the State government's progress in meeting the goals of the SAEP, which include reducing energy consumption and greenhouse gas emissions. Therefore, the State does not know whether it is on track to meet these goals. BGS cannot reliably report on progress towards achieving the goals of the SAEP because: (1) they have not established a system to capture all State-owned building energy use; (2) they do not have documented baselines against which to measure progress; (3) they have not implemented a system to capture the amount of energy used in leased building spaces; and (4) they have not implemented a system to accurately capture the quantity of transportation fuels used by State employees.

Audit Recommendation #1: Report biennially to the Secretary of Administration on the implementation of SAEP and progress towards its goals.

Management Response: Agreed.

Proposed Implementation Plan and Timeline: BGS will draft updated SAEP reports on a biennial timeline and will have a 2026 SAEP report prepared for release by the end of fiscal year 2027.

Audit Recommendation #2: Develop and implement an accounting system that captures all State building energy use, including leased buildings.

Management Response: BGS agrees that the program currently lacks accounting for all state buildings and leased space. While the Department maintains accounts for BGS owned and operated buildings in Energy Star Portfolio Manager (ESPM), we are unable to edit account information for buildings in ESPM that BGS does not own and are reliant upon staff at partner state agencies and departments to update their building accounts. Given the variety in lease agreements and complications in standardization between private property owners it has been difficult to bring leased space under the program umbrella. BGS has been



Appendix V

Comments from Management

examining several options for solving these issues. Regarding leased space, in fiscal year 2025 the Department began a review of lease agreements and utility information sharing with property owners.

Proposed Implementation Plan and Timeline: BGS will assess options for expanding to an accounting system that includes buildings not owned by BGS in calendar year 2026. BGS will continue working with property owners to provide this information and will have procedures written by the end of fiscal year 2026.

Audit Recommendation #3: Develop documented baselines for the SAEP goals.

Management Response: BGS agrees that baselines need to be established for the SAEP. This effort will likely be best served alongside an examination of statutory goals and targets governing emissions reduction to ensure alignment.

Proposed Implementation Plan and Timeline: BGS will work with partner agencies and departments to review historic energy consumption information and statewide energy and emissions reduction targets to develop recommendations for adopted baselines by December 1st, 2026.

Audit Recommendation #4: Develop and implement a system to capture the amount of transportation fuels used by State employees.

Management Response: BGS agrees that a system needs to be adopted to better capture fuel use by state employees. Because some agencies and Departments like the Agency of Transportation keeps separate accounting for their vehicles, including large specialty vehicles, and BGS operates and maintains general state fleet vehicles, this system should be focused on the BGS Fleet portion of state transportation emissions.

Proposed Implementation Plan and Timeline: Program staff will work with the BGS Fleet Management office to write new standard operating procedures for the capture and accounting of transportation fuels by the end of 2026. Additionally, BGS will explore coordination of all statewide transportation fuel accounting with AOT.

Audit Objective 2: Determine whether the BGS Energy Office selects the most cost-efficient energy savings projects for buildings.

Audit Finding: BGS generally selects projects that meet the payback requirements, although questionable loan application practices allowed two projects with negative payback to proceed. BGS may be missing opportunities to identify and generate energy and cost savings because it only contracts for energy audits on buildings it controls, not other State-owned buildings, and BGS does not consider leased space for energy efficiency projects. Also, BGS has completed a very modest number of projects in the last few years, due primarily to a lack of staff to vet the projects.

Audit Recommendation #5: Amend the SEMP guidelines to clarify that even when projects are bundled to reduce the average payback period, every project and every measure must still comply with the statutory requirement to achieve an overall financial savings.

Management Response: The Department agrees that all approved projects should meet the statutory savings requirement. With regards to the mention of “questionable loan application practices” on page 2 of the report,

Comment 1
on page 37



Appendix V

Comments from Management

Comment 1
on page 37

Comment 2
on page 37

BGS acknowledges that the example provided is not in keeping with best practices, but would like to clarify that this has not been standard practice in the program. Instead, this was an isolated project example that has not been repeated before or since. In an effort to save on construction costs and reduce disruption impacts to building tenants approved projects have worked to bundle as many measures together as possible into a single project. This has also allowed the program to implement larger and more capital-intensive building improvements with longer payback periods, such as new boilers, alongside measures with faster payback periods like lighting and automated controls. Requiring that each single measure meets the savings payback requirements could impact statutory emissions reduction or Greenhouse gas targets by cutting out larger capital improvements to building heating and cooling equipment.

Proposed Implementation Plan and Timeline: The Department will write application procedures and define project measure selection methodology to ensure that all approved projects will meet the savings requirements. Addressing the alignment of project measure selection and financial savings with emissions reduction targets set by statute will require additional deliberation and coordination with other agencies. The Department will work on a proposal to address this issue by the end of fiscal year 2027.

Audit Recommendation #6: Amend the SEMP standard operating procedure to clarify that when SERF or SRMRF is combined with other funding sources, the entire investment must generate a positive return.

Management Response: Agreed.

Proposed Implementation Plan and Timeline: The Department will draft updated standard operating procedures governing the use of combined funds when implementing energy projects. New SOPs will be submitted to the Commissioner for review and approval by the end of fiscal year 2026.

Audit Recommendation #7: Contract for energy audits on buildings controlled by all State entities, not just BGS-controlled buildings.

Management Response: The Department agrees that energy audits on all State buildings, including those not controlled by BGS, would be beneficial to the development of the energy project pipeline. Prior to conducting these additional audits, a review of budget resources, spending authority, and work authorization should be conducted to understand what is currently being done by these building operators and if additional resources are needed.

Proposed Implementation Plan and Timeline: The Department will work with partner agencies and departments to discuss expanding energy auditing to buildings not controlled by BGS. BGS will begin scheduling coordination meetings with the appropriate staff in calendar year 2026.

Audit Recommendation #8: Require energy auditors to include in their reports estimates of lifetime savings as well as annual savings.

Management Response: Agreed.

Proposed Implementation Plan and Timeline: A new BGS energy auditing contract has been in development in fiscal year 2026 with the Office of Purchasing and Contracting that includes language requiring lifecycle cost analysis. BGS anticipates releasing a new auditing contract request for proposal by the end of fiscal year 2026.



Appendix V

Comments from Management

Comment 3
on page 38

Audit Recommendation #9: Implement the operations procedures for the use of energy efficiency measures, thermal energy conservation measures, and renewable energy resources in leased space.

Management Response: Agreed.

Proposed Implementation Plan and Timeline: The Department will draft and finalize updated standard operating procedures for the use of energy efficiency measures, thermal energy conservation measures, and renewable energy resources in leased space by the end of fiscal year 2027.

Audit Objective 3: Determine whether the BGS Energy Office assessed the outcomes of energy savings projects for buildings.

Audit Finding: The BGS Energy Office did not reliably assess outcomes of energy savings projects for buildings. A comparison of lifetime savings data maintained by BGS and EVT revealed that they differed by 30 percent or more for 9 of the 13 projects we reviewed. In all but one instance, BGS recorded greater lifetime savings than EVT. This indicates that BGS did not accurately assess project outcomes because they did not finalize or reconcile lifetime savings data with EVT. Consequently, BGS reported unfinalized project data in the State Energy Management Program Annual Report, overstating annual and lifetime dollar and energy savings to the State Legislature and Vermont taxpayers.

Audit Recommendation #10: Implement more energy efficiency projects to attain at least the first -year savings target.

Management Response: Agreed. The Department has been undergoing recruitment for the two vacant energy project manager positions in fiscal years 2025 and 2026 and expects to start one new employee in January 2026. Additionally, BGS will examine opportunities for better project development in coordination with ongoing major maintenance project management practices.

Proposed Implementation Plan and Timeline: The Department will continue to recruit for the second energy project manager position in the second half of fiscal year 2026. By December 1, 2026, BGS will conduct an internal evaluation of project pipeline development and management and draft new procedures for ensuring additional energy project implementation.

Audit Recommendation #11: Regularly finalize and reconcile energy savings data with corresponding data maintained by the efficiency utilities and ensure EVT verifies the accuracy of energy savings data prior to issuing public reports to the Legislature.

Management Response: The Department agrees that regular post installation project savings evaluations should be conducted to verify energy savings. Energy savings measurement and verification (M&V) can be conducted at a variety of levels with corresponding levels of accuracy, from simple post install spot checks to full equipment diagnostics and testing. Proposed Implementation Plan and Timeline: BGS will explore the adoption of post installation diagnostics procedures and associated budgetary impacts in 2026.



Appendix V

Comments from Management

Comment 4
on page 38

Audit Recommendation #12: Align the SAEP goals with the goals outlined in Act 40 (2011) or ask the Legislature to revise the statute.

Management Response: Agreed.

Proposed Implementation Plan and Timeline:

BGS will assess whether to revise the SAEP goals and/or develop a recommendation for the Legislature in coordination with partner agencies and departments.

Other Matters:

Audit Finding: The MOU Between BGS and EVT Expired Six Years Ago

Audit Recommendation #13: Execute a new or amended MOU with EVT.

Management Response: Agreed.

Proposed Implementation Plan and Timeline: The Department has been in discussion with EVT on a new MOU and will work to have that MOU finalized by the end of fiscal year 2026. BGS appreciates the ongoing partnership with EVT and is committed to finalizing a new MOU.

Audit Finding: BGS is Overstating Annual Target Performance.

Audit Recommendation #14: Do not include ongoing savings from solar net metering savings when calculating the annual performance for the SEMP.

Management Response: The Department agrees that increasing annual savings from newly completed energy efficiency projects is a priority, however, the statutory requirement of \$150,000 in "total energy usage and related costs" reductions does not stipulate that annual savings from reduced electricity costs resulting from solar production can't be included. Solar electricity savings represent an annual benefit to taxpayers through the reduction in grid purchased electricity.

Proposed Implementation Plan and Timeline: BGS will assess whether any changes need to be implemented in how we calculate savings or any statutory recommendations should be developed to clarify this issue.



Appendix VI

SAO Evaluation of Management's Comments

In accordance with generally accepted government auditing standards, the following tables contain our evaluation of management's comments.

Comment #	Management's Response	SAO Evaluation
1	<i>With regards to the mention of "questionable loan application practices" on page 2 of the report, BGS acknowledges that the example provided is not in keeping with best practices, but would like to clarify that this has not been standard practice in the program. Instead, this was an isolated project example that has not been repeated before or since.</i>	We did not state this was a standard practice.
2	<i>In an effort to save on construction costs and reduce disruption impacts to building tenants approved projects have worked to bundle as many measures together as possible into a single project. This has also allowed the program to implement larger and more capital-intensive building improvements with longer payback periods, such as new boilers, alongside measures with faster payback periods like lighting and automated controls. Requiring that each single measure meets the savings payback requirements could impact statutory emissions reduction or Greenhouse gas targets by cutting out larger capital improvements to building heating and cooling equipment.</i>	<p>Vermont law requires SEMP funds be expended only for measures anticipated to generate a cost-savings to the State. That is what we reported.</p> <p>BGS is allowed to use non-SEMP funds to pay for capital improvement projects that reduce greenhouse gas emissions but do not meet SEMP cost-savings requirements.</p>

Appendix VI

SAO Evaluation of Management's Comments

Comment #	Management's Response	SAO Evaluation
3	<i>The Department agrees that regular post installation project savings evaluations should be conducted to verify energy savings. Energy savings measurement and verification (M&V) can be conducted at a variety of levels with corresponding levels of accuracy, from simple post install spot checks to full equipment diagnostics and testing. Proposed Implementation Plan and Timeline: BGS will explore the adoption of post installation diagnostics procedures and associated budgetary impacts in 2026.</i>	<p>BGS requires EVT to finalize savings estimates by performing a verification inspection after a project is completed. We did not recommend anything that would require additional work other than BGS obtaining the finalized savings that EVT calculated. Furthermore, the annual report to the Legislature is a joint report from BGS and EVT, therefore BGS should ensure that EVT verifies the accuracy of the energy savings data prior to issuing the public reports to the Legislature.</p> <p>We added the following sentence on report page 17: "Vermont law requires BGS and EVT to jointly provide an annual SEMP to the State Legislature that contains the savings achieved by SEMP projects."</p>
4	<i>The Department agrees that increasing annual savings from newly completed energy efficiency projects is a priority, however, the statutory requirement of \$150,000 in "total energy usage and related costs" reductions does not stipulate that annual savings from reduced electricity costs resulting from solar production can't be included. Solar electricity savings represent an annual benefit to taxpayers through the reduction in grid purchased electricity.</i>	<p>The Legislature required BGS to save \$150,000 in fiscal year 2016, which was the first year of the program. According to every annual report to the Legislature, BGS set its annual savings target based on the minimum of \$150,000 in new savings the Legislature intended for the first year of the program. Indeed, BGS includes a chart in its annual reports to the Legislature that identifies first-year savings, but BGS includes ongoing savings from solar net metering projects as part of those savings.</p> <p>We do not dispute that solar, just like energy efficiency projects, provides an ongoing benefit. However, including ongoing savings from solar overstates first-year savings. This is akin to including ongoing savings from previous energy efficiency projects and including them under first-year savings as well.</p>