

# State Energy Management Program

Brian Sewell, State Energy Program Manager

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

Vermont Department of Buildings and General Services

Peter Walke, Director

Efficiency Vermont

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# History and Background

SEMP is responsible for all energy management measures in state buildings and facilities

2014: ACT 178 Capital Bill established the SEMP

- State Energy Revolving Fund.
- State Resource Management Revolving Fund.

2016: ACT 58 Big Bill augmented the SEMP for four years

- Efficiency Vermont Reimburses the State of Vermont for three full time employees.
- BGS and Efficiency VT are required to save \$150,000 in energy savings annually.
- BGS works with state agencies and the Climate Cabinet to generate the State Agency Energy Plan.

2022: ACT 172 Municipal Energy Resilience Program augmented the SEMP for four years.

- Within the expansion of services to municipalities, the existing SEMP is extended through 2027.



# History and Background

Since 2016, BGS's partnership with EVT has included:

- ▶ Staffing for 3 Positions (2 PMs and 1 Coordinator)
- ▶ Program Training and Technical Support
  - Annual Building By Design Conference
  - Lighting Tool
- ▶ Measurement and Verification
- ▶ Project and Equipment Incentives
- ▶ Joint Annual Reporting

Efficiency  
Vermont



# SEMP Process



- ▶ Energy Use Tracking



- ▶ Investment Grade Energy Audit
  - BGS Maintains 3 Million Square Feet of owned facility space



- ▶ Project Scope Development and Funding
  - SEMP contains 2 Revolving Loan Funds
  - Project Managers develop Statement of Works and oversee construction



# SEMP Process

## Energy Conservation Measures

- ▶ Installation of energy efficient buildings and building systems
  - LED lighting with sensor technology
  - Weatherization & Insulation
  - Renewable heating and cooling systems
  - Optimizing building automation systems
  - Battery back-up systems
- ▶ Maximizing reliance on renewable energy generation
- ▶ Flexible load management strategies



# SEMP Process

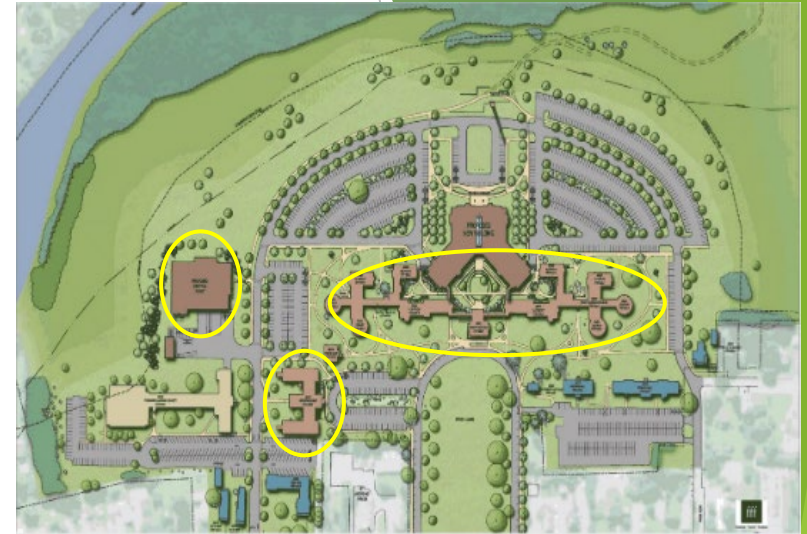
## Project Funds

- ▶ State Energy Revolving Fund (SERF)
  - \$8M Credit Facility under State Treasurer
  - 7 Year Payback Requirement started in 2018
- ▶ State Resource Management Revolving Fund (SRMRF)
  - \$1.5mM Account under BGS Commissioner
  - Payback tied to life of the equipment



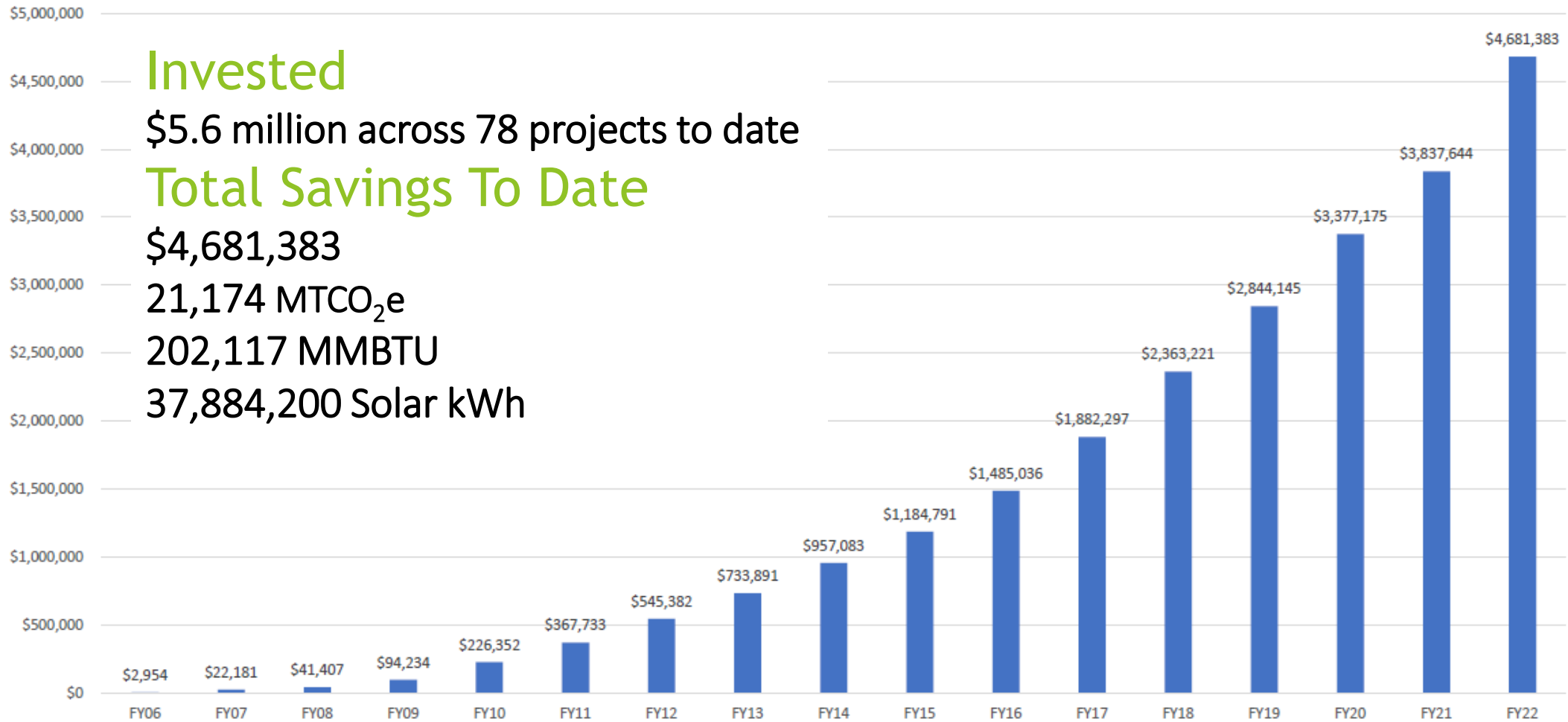
# Key Projects

- ▶ Flexible Load Management at BGS Facilities
  - ▶ Biomass Heating for Middlesex Central Services
  - ▶ Mahady Courthouse advanced lighting and controls
  - ▶ Barre Courthouse & Rutland Multi-Modal Transit Center LED Conversion
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- ▶ **Agency Partner Projects**
    - ANR- Recirculation Pumps, Boiler replacement, and Solar PV for Fish Culture Stations
    - VTrans –AOT Central Garage Lighting
    - DOC - NSCF Lighting, SSCF Energy Improvements, MVRFCF project planning underway



# Results

State Energy Management Program Cumulative Savings



**Invested**

\$5.6 million across 78 projects to date

**Total Savings To Date**

\$4,681,383

21,174 MTCO<sub>2</sub>e

202,117 MMBTU

37,884,200 Solar kWh





# Integrating a Culture of Energy Efficiency

- ▶ To embed a culture of energy efficiency and improve communication and collaboration, staff was co-located in:
  - The Planning and Property Management Division
  - The Design and Construction Division
- ▶ This will allow a pipeline of energy efficiency projects to be incorporated into Capital Bill line item and Major Maintenance projects and provide technical assistance to both divisions.



# Expansion of Services: Municipal Energy Resilience Program

- ▶ Act 172 Signed June 2 2022, “An act relating to municipal energy resilience initiatives”
- ▶ \$45M ARPA Funding for the program to:
  - Conduct building assessments
  - Education and outreach
  - Energy resilience improvement projects

[bgs.vermont.gov/municipal-energy-resilience-program](https://bgs.vermont.gov/municipal-energy-resilience-program)

