

State Energy Programs Summary, Audit Response, and MERP

Testimony House Committee on Energy & Digital Infrastructure
April 23rd , 2026

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Testimony Agenda

- 1. Overview of the State Energy Management Program (SEMP)**
- 2. SEM P Audit Responses.**
- 3. Overview and Update on the Municipal Energy Resilience Program**

SEMP Program Background

Annual Reports

October 2025

Program Report

January 2026 Fund

Report

*Energy Office responsibilities have expanded to include:

- Electric Vehicle Supply Equipment (EVSE)
- Energy Storage
- The Municipal Energy Resilience Program

High Level Program Description and history

The State Energy Management Program (SEMP) is responsible for all energy management measures in State buildings and facilities.

2014: ACT 178 established the SEM, implemented through two revolving funds: the State Energy Revolving Fund & State Resource Management Revolving Fund.

2016: ACT 58 augmented the SEM for four years.

Efficiency Vermont reimburses the State of Vermont for three full time employees.

BGS and Efficiency VT are required to achieve \$150,000 in energy savings annually.

2022: ACT 172 Municipal Energy Resilience Program augmented the SEM for four years. Within the expansion of services to municipalities, the existing SEM is extended through 2027. *** The program requires statutory reauthorization next year***

- SEM has four staff:
 - Admin (Planning and Property Management)
 - Manager & Coordinator
 - Project Implementation (Design and Construction)
 - Two Project Managers
- Following Act 172, The Energy Office has three additional staff to help administer the Municipal Energy Resilience Program also run by the Manager.

Program Background



SEMP Process

- Energy Use Tracking
 - BGS directly inputs information for facilities under BGS jurisdiction and relies on other agencies and departments to enter information for the facilities they manage
- Investment Grade Energy Audit
 - BGS Maintains 3 Million Square Feet of owned facility space
 - Planning to integrate about 1 Million Square Feet of leased space
- Project Scope Development and Funding
 - SEMP contains two Revolving Loan Funds
 - Project Managers develop SOW and oversee construction



Program Successes

Vermont State Offices - Waterbury

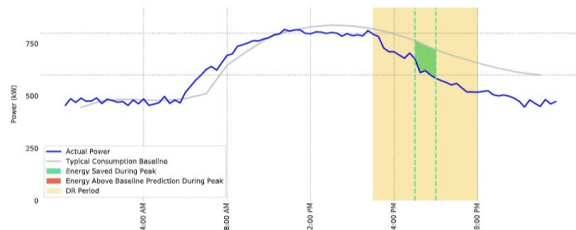
Predicted Average During FCM Peak: 719.8 kW
Actual Average During FCM Peak: 603.7 kW
Observed Reduction During FCM Peak: 116.0 kW
Reward Rate: \$58.80/kW
FCM Reward: \$6,822.97

July 2019 Peak Event
Date: Tuesday July 30, 2019
DR Requested: 3:00 PM - 8:00 PM
Peak Type(s): FCM
FCM Peak Hour: 5:00 PM - 6:00 PM

Peak Day Loadshape (Tuesday July 30, 2019)

Congratulations! You've received a reward of \$6822.97 for your demand response actions this month.

This plot shows your actual usage against your 'baseline' or typical power usage on the peak day for this month. The 'baseline' considers weather, previous energy usage, daily, weekly, and seasonal cycles to produce a value that would be typical for your site.



SEMP

- In addition to our ongoing energy management work, the SEMP has been a vehicle for investigating and implementing innovative new technologies at state facilities
- Flexible Load Management Pilot
 - Launched 2019 with WSOC expanded to three additional facilities by 2025
 - Cost \$38.5k – Software and Equipment Controls Integration
 - Savings to Date FLM 1. \$8,037, FLM 2. \$14,708, FLM 3. \$29,966 = \$52,711
- Fuel Switching - Middlesex Central Services - Replaced Oil Boiler with Biomass
 - Cost \$683K v. Annual Savings of \$33k & 151 MTC02e.
 - Estimated Lifetime savings of \$1,003,442 and 4,532 MTC02e (eqv. 11.5M miles driven)
- Transportation Emissions – EVSE
 - The Energy Office worked with BGS Fleet to expand EVSE at state facilities from eight stations in 2019 to 35 in 2025. Station session data helps inform the deployment of additional resources and allows us to adjust cost recovery

Audit Findings and Responses

- **State Auditor's Office announced an audit of the SEMP in February 2025. Requests for information covered data from FYs 2016-25:**
 - Energy data in ESPM
 - Project information from GRITS VISION from FSD
 - Transportation data from BGS Fleet

The Audit Report was issued on January 20, 2026

The audit made several findings regarding deficiencies in the SEMP processes, and made recommendations.

BGS provided a response, which is included in the Audit Report as Appendix V. We generally agree with the Audit Findings and Recommendations, and outlined planned steps and timelines to address deficiencies.

Some key areas of deficiency noted include how we track and address energy use for facilities that aren't owned by BGS and fuel use by vehicles, how we verify energy savings data, the number of energy efficiency projects completed, and how we establish baselines and report on progress towards SAEP goals.

Opportunities for Improvement

- **Data Tracking and Savings Measurement & Verification (M&V)**
 - While the department maintains accounts for BGS owned and operated buildings in ESPM we are unable to edit account information for other state buildings and are reliant upon partner agencies to update their accounts. BGS has already begun looking into utility accounting systems to provide enhanced tracking.
 - BGS agrees that regular post installation project savings evaluations should be conducted to verify energy savings. Energy savings M&V can be conducted at a variety of levels and BGS will explore the adoption of post installation diagnostics procedures and associated budget impacts.
 - BGS acknowledges need for improvement in statewide energy reduction tracking and has committed to updating SAEP reports on a biennial basis and will have a 2026 report prepared for release by the end of FY2027.

Opportunities for Improvement

- **Updating program statute and baselines to better align with state targets**
 - BGS agrees that baselines need to be established for the SAEP. 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.
- **Project Bundling and Meeting Overall Savings Requirements**
 - To reduce disruption and achieve construction efficiencies, we have at times bundled measures into a single project. To ensure each measure meets savings requirements, BGS will draft updated SOPs governing the use of combined funds when implementing energy projects and provide them to the Commissioner for review by the end of FY2026.

Opportunities for Improvement

- **Staffing**
 - BGS acknowledges significant issues with staffing over the last four years as well as increases in project costs beyond what traditional savings can cover. With regards to staffing, BGS is pleased to say that both project manager positions have been filled in January 2026, and we expect to begin new project development by the end of the fiscal year.
- **Leased Space**
 - BGS acknowledges that while processes for energy reduction in leased space were developed in 2014, there have been significant challenges to practically implementing them given the variety in lease agreements and complications in standardization between private property owners. However, BGS has started the data collection process and is committed to working with property owners to development implementation procedures in leased space by the end of FY2027.
- **Vehicle emissions**
 - Program staff will work with BGS Fleet Management to write new SOPs for the capture and accounting of transportation fuels by the end of 2026. Additionally, BGS will work with AOT on the coordination of all statewide transportation fuel accounting.

MERP

Program
Description

January Report

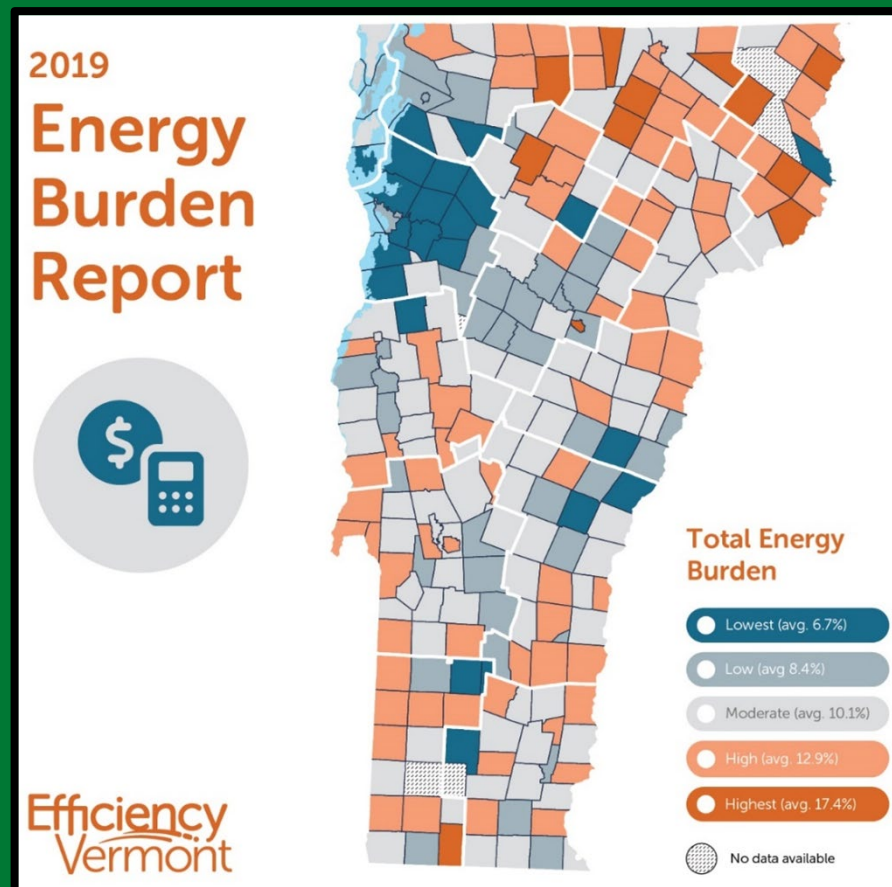
Municipal Energy Resilience Program (MERP)

\$45M Grant Program

Four Phases:

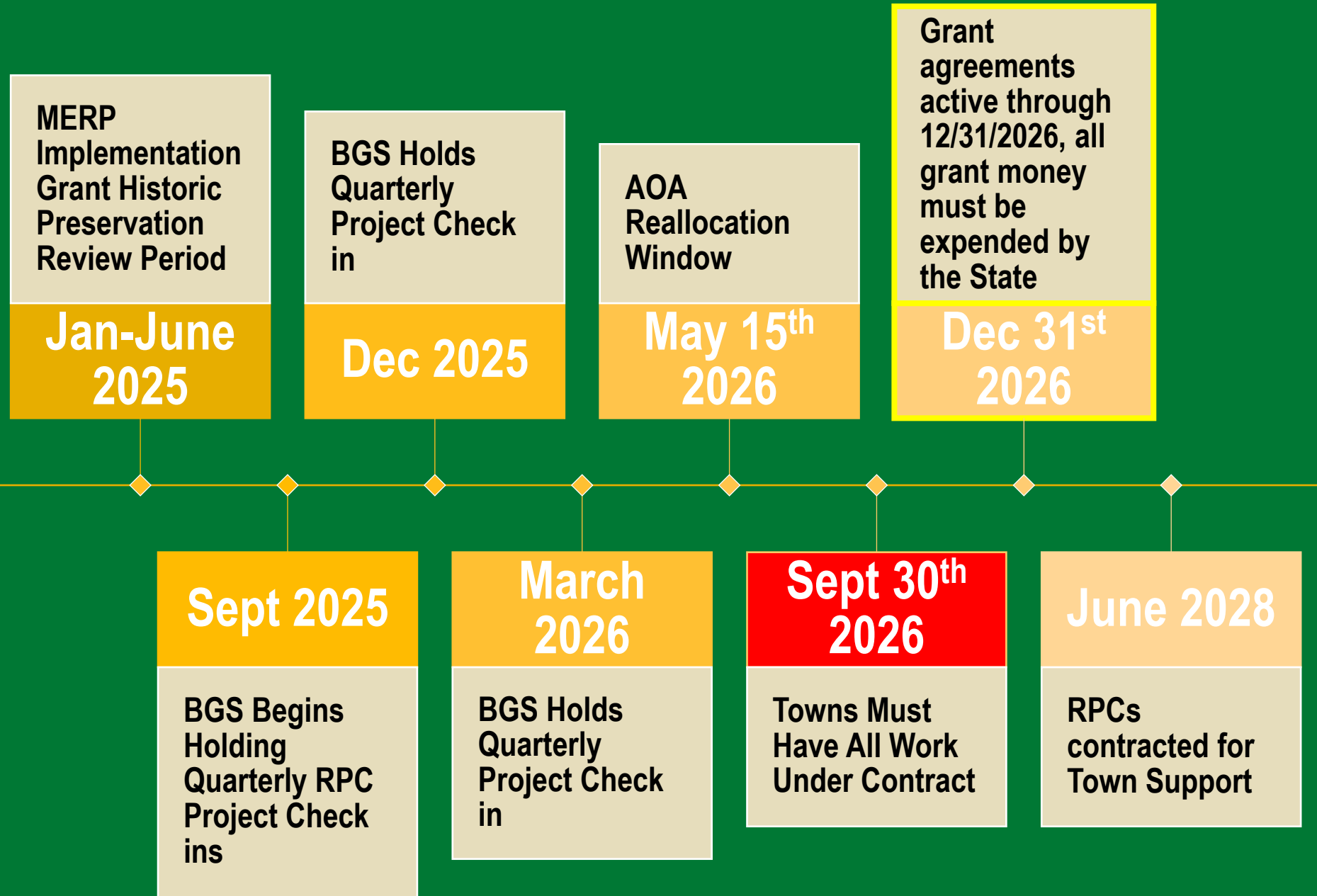
1. RPC Funding
2. Mini Grants
3. Assessments
4. Implementation

Phase 4 - \$35.9M in
Implementation grants for
municipalities (\$500k max)



MERP

General Timeline



MERP

Phase 1. Establish Partnerships

MERP Administrative Partnerships stipulated in Act 172:



MERP Partnerships not stipulated in Act 172,
but established through course of the program:



MERP

Phase 2. Mini Grants

Goal: Kickstart
Capacity
Building and
Town Planning

\$377K Not Yet
Reported on.
Many towns
spending in
support of IG
plans.

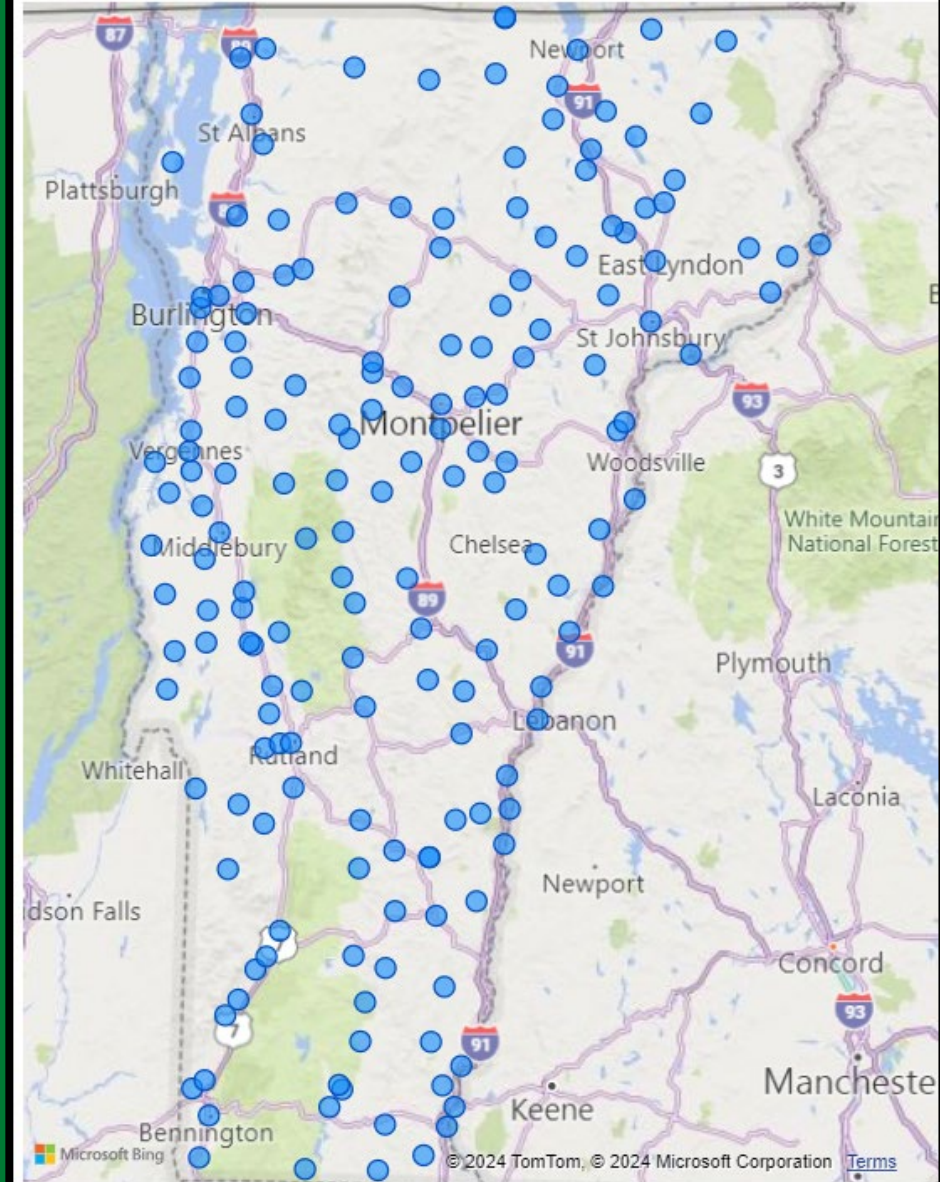
\$1.1M Budget in noncompetitive grants for municipalities: up to \$4,000

175 Awards Totaling almost \$700K



MERP Mini-Grant Awardees

Scroll or pinch to zoom in/out. Click and drag to pan around.



MERP

Phase 3.
Energy
Resilience
Assessments

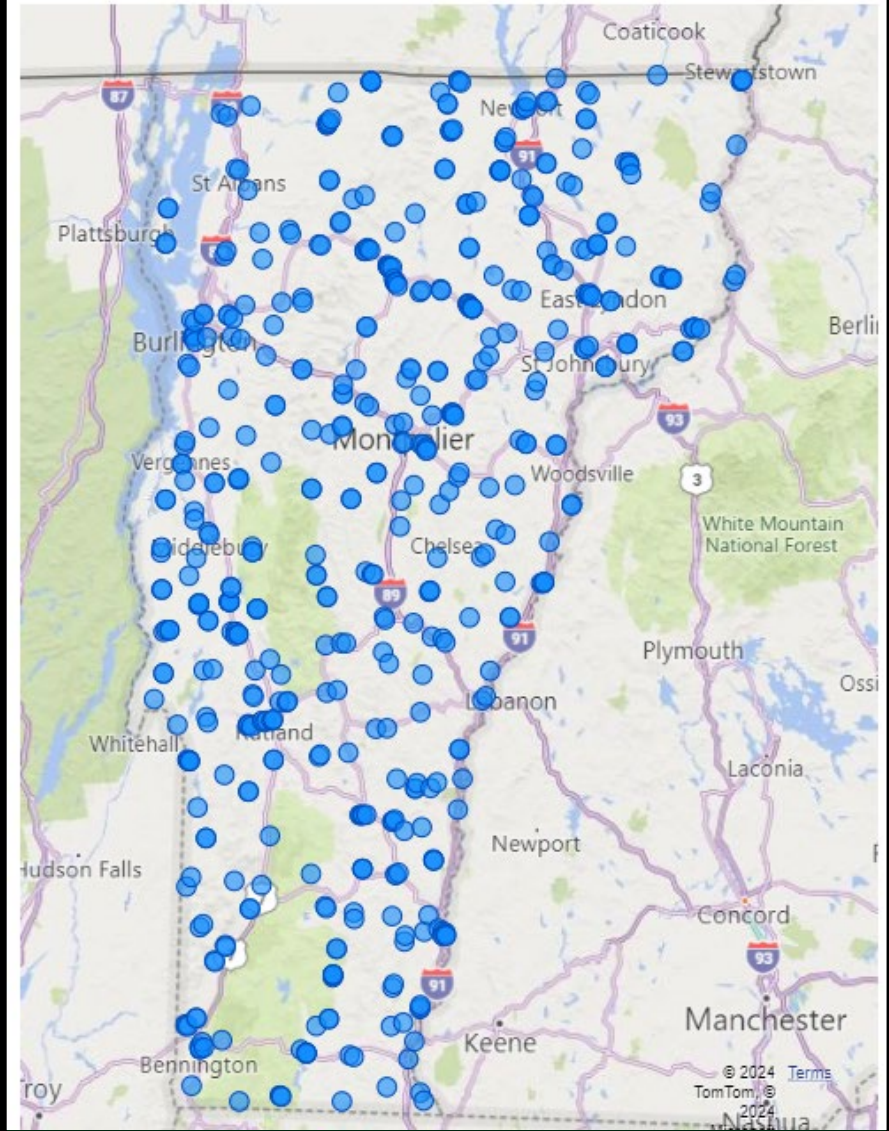


\$5M Budget
\$3.2M Spent



MERP Completed Site Visits

Scroll or pinch to zoom in/out. Click and drag to pan around.

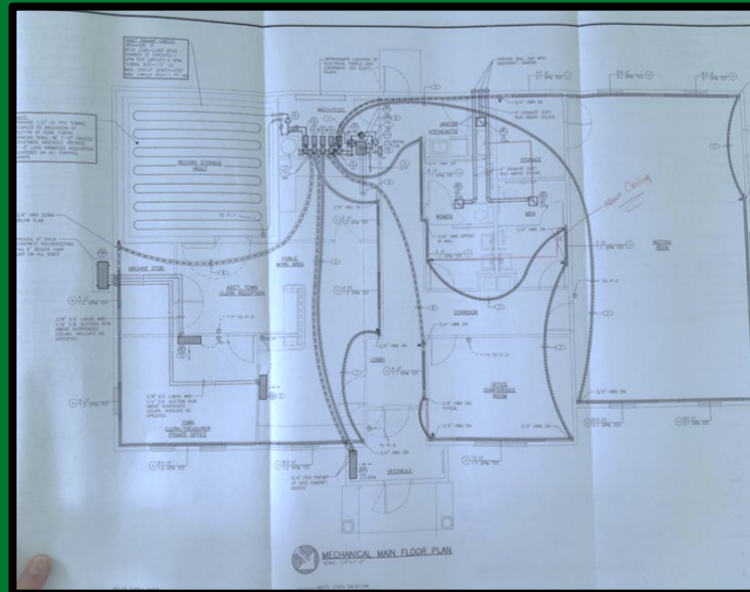


MERP

Phase 3. Energy Resilience Assessments

201 Level 1 & 330 Level 2

Soft	# of Bldgs	% Total	Avg Cost	Min Cost	Max Cost	Avg Cost per soft
1-5,000	338	64%	\$6,443.63	\$2,115.00	\$25,825.00	\$3.04
5,001-10,000	116	22%	\$9,279.66	\$3,909.00	\$29,140.05	\$1.30
10,001-15,000	32	6%	\$13,472.93	\$4,850.00	\$30,977.75	\$1.13
15,001-20,000	18	3%	\$14,108.34	\$4,850.00	\$36,831.12	\$0.79
20,001-50,000+	27	5%	\$15,931.90	\$5,332.04	\$25,507.30	\$0.42
Grand Total	531	100%	\$8,100.17	\$2,115.00	\$36,831.12	\$2.35



Sunderland Town Hall Mechanical Floor Plan (image via DuBois & King)

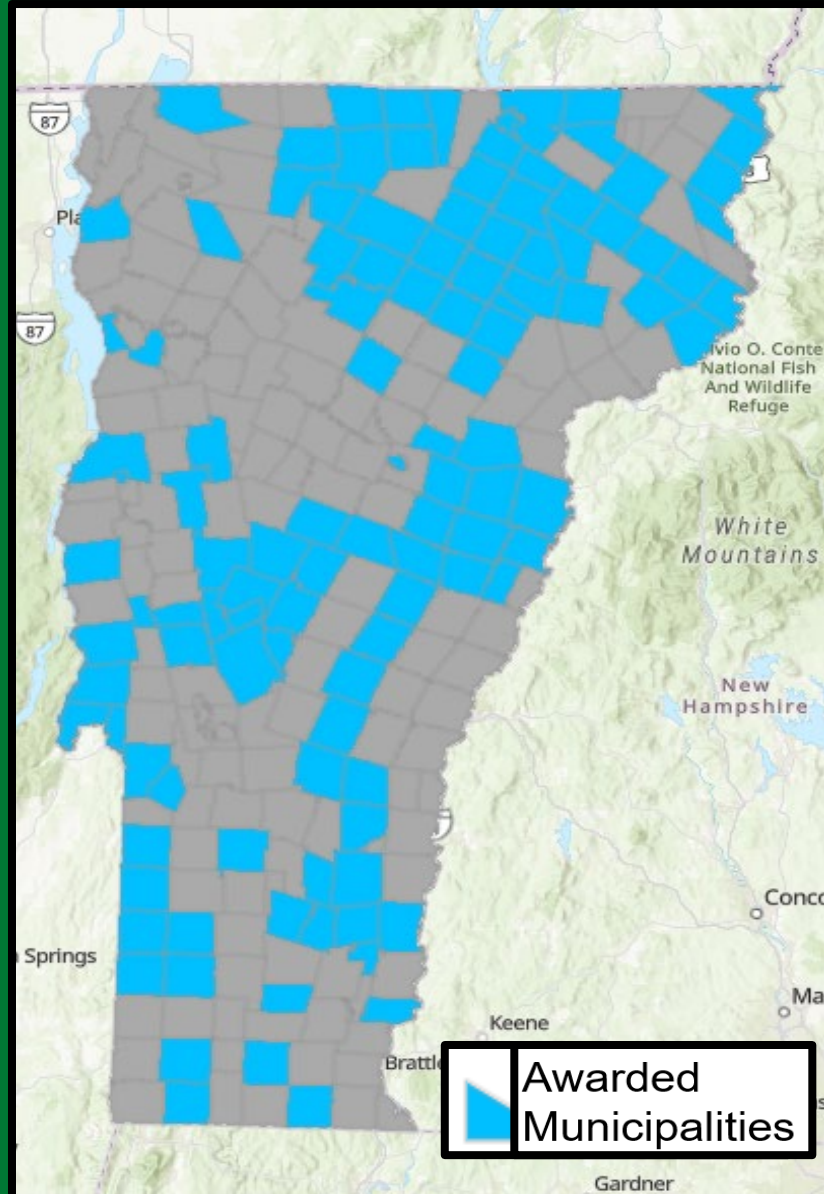


Hartland Public Library Solar Feasibility (image via John Turner Consulting)

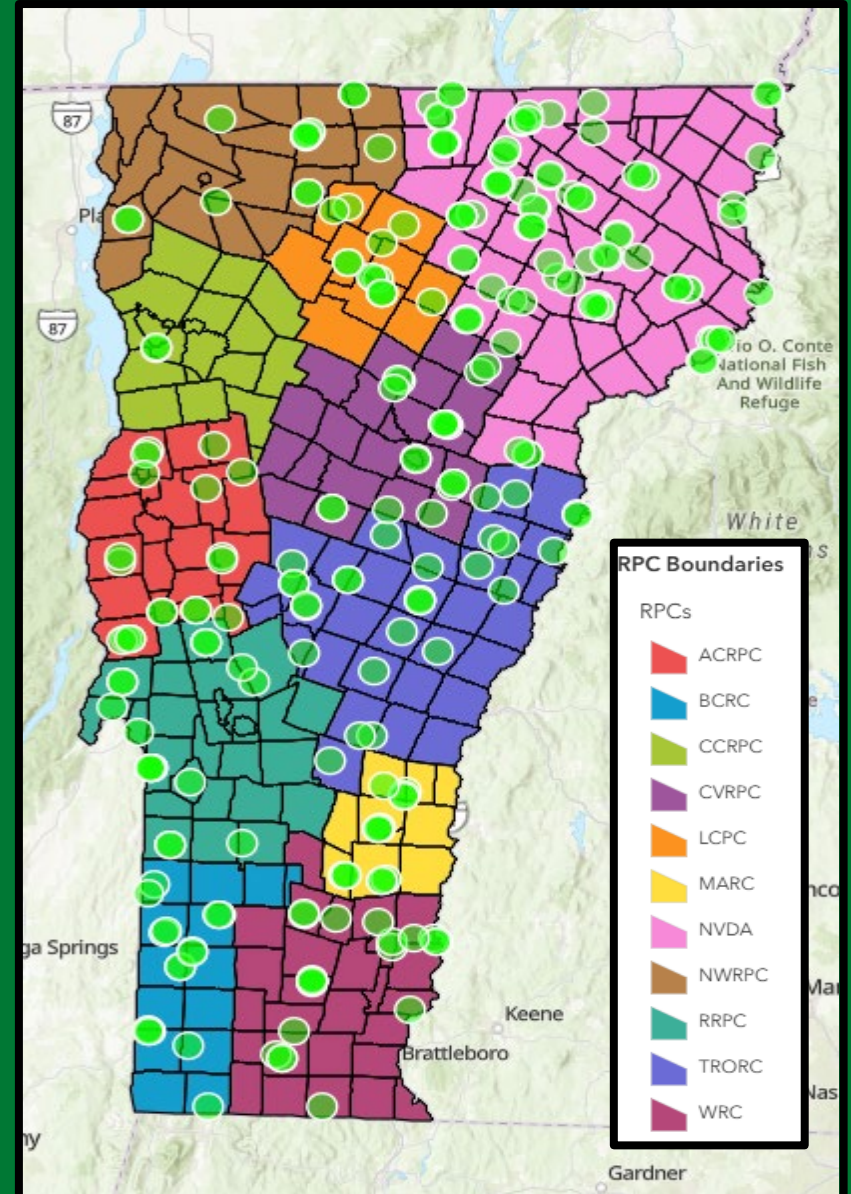
MERP

Phase 4. Implementation Grants

MERP Implementation Grant –
Awarded Municipalities



MERP Implementation Grant –
Awarded Buildings



MERP

Phase 4. Implementation Grants

Envelope



Equipment Electrification and Fuel Switching



Resilience

#	Measure
234	Thermal Envelope Projects
136	Smart Control Systems
148	LED Lighting Upgrades
74	ERV Installations
106	ADA Improvements

232	Heat Pumps
5	Radiant Infrared Heaters
7	Geothermal Heating Systems
10	Wood Pellet Heating Systems
46	Conversions to High Efficiency Boiler

76	Solar Photovoltaic Systems
56	Battery Backup Systems
56	EVSE Level 1 & 2 Chargers

Envelope work is consistently costing more than original estimates.

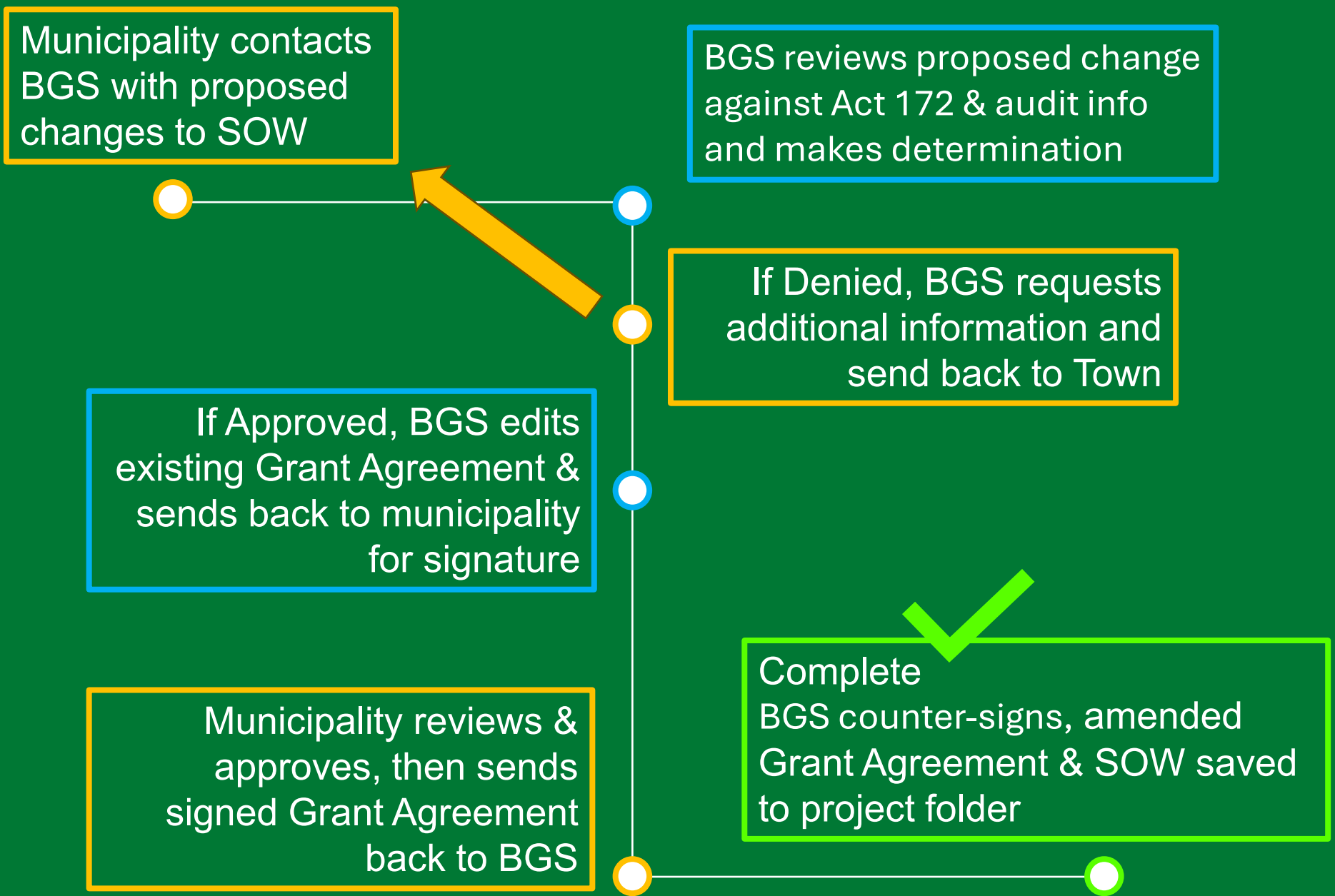
HVAC and Fuel switching-many towns choosing to keep the primary system as back up. Integration of mini splits with the existing system is common.

Budget for resilience measures often used to fully fund envelope and HVAC. Some are reducing the size to still implement resilience measures.

MERP

Scope of Work (SOW) Amendment Process

76 SOW
amendments to
date



MERP

Phase 4. Implementation Grants

MERP Municipal Projects: Field Notes

Why an increase in costs for envelope work? Demand and costs of materials and labor have increased year over year.

Involvement of professional designers and architects has also encouraged towns to focus on building shell. Some towns have expressed that the grant has empowered them to pursue envelope measures that the towns would never have afforded on their own.

Because this is a unique opportunity, communities can afford to do it right. Not just a one-off measure, but a total package of air sealing, insulation, new windows and doors, removing moisture issues and improving the over all envelope.

MERP

Phase 4. Implementation Grants

MERP Municipal Projects: Field Notes

HVAC systems cross-over point. Integration of smart thermostats allows town to optimize boiler to kick on at 10F and use heat pumps for heating and cooling above that temperature.

For the first time many towns will have the ability to cool in summer. While this may not reduce electricity consumption, it will increase quality of environment for workers and citizens and provide access to cooling shelters for the community.

Resilience measures will be lower in the overall number installed, but towns are keeping them in SOW, waiting to see if the budget allows for install.

Installing solar to cover the heat pumps is by far the best ROI for the grant. Adoption by the boards/towns is higher when they understand that the solar production will "pay" for the heating.

MERP Survey Takeaways

427 Recipients from
Program Email Listserv

Survey received 88 valid
responses, for a
response rate of 20.6%

Of the 88 respondents,
85 reported participating
in at least one of the
three phases of MERP

The Regional Planning Commissions that responded scored lower on quantitative responses compared to municipalities:

- Qs re: Implementation Grants = ~2.33 points lower
- Qs re: Energy Assessments = ~2.95 points lower
- Qs re: Mini-Grants = ~3.05 points lower

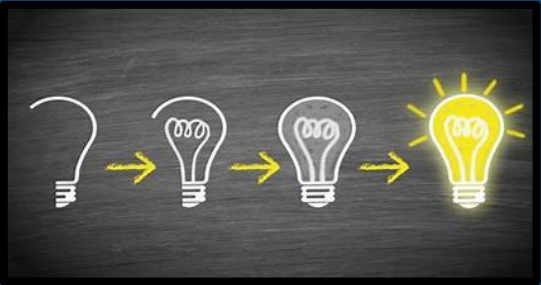
Municipalities were extremely reliant on Regional Planning Commission support and assistance throughout all aspects of MERP.

Municipalities would benefit from State assistance in identifying & securing contractors to complete MERP-funded projects.

Municipalities experienced several struggles with the Energy Assessment process & the quality of the deliverables.

MERP is an extremely popular and successful program that has delivered high-value outcomes to hundreds of municipalities across the State. Appreciation & support for MERP was the single most prevalent theme across the qualitative responses provided by municipalities, appearing over 40 times.

MERP Lessons Learned



The ability for the State to coordinate RFP/Contracting process for IGs would alleviate a lot of capacity stress for small towns.

FLEXIBLE! We have consistently heard from towns that the flexibility built into program administration, SOW changes, and payments has been fundamental to completing the work.

The “gap” between assessment reports and design build RFP scopes of work has been a major challenge for towns.

Towns without dedicated key staff/persons who understand the details of the program and can champion the work are at a significant disadvantage. TM turnover has impacted towns.

RPCs have been essential for coordinating on the ground, especially during assessment phase. However, there are stresses inherently built into the design of the program when making RPCs co-administrators with BGS to their member towns.

According to our survey responses, about 21% of Towns not awarded an IG said they would still pursue audit recommendations, while 25% said no.

Thank you!

BGS.Vermont.gov/commissioner/energy-environment

BGS.Vermont.gov/municipal-energy-resilience-program