Climate Investments in Vermont

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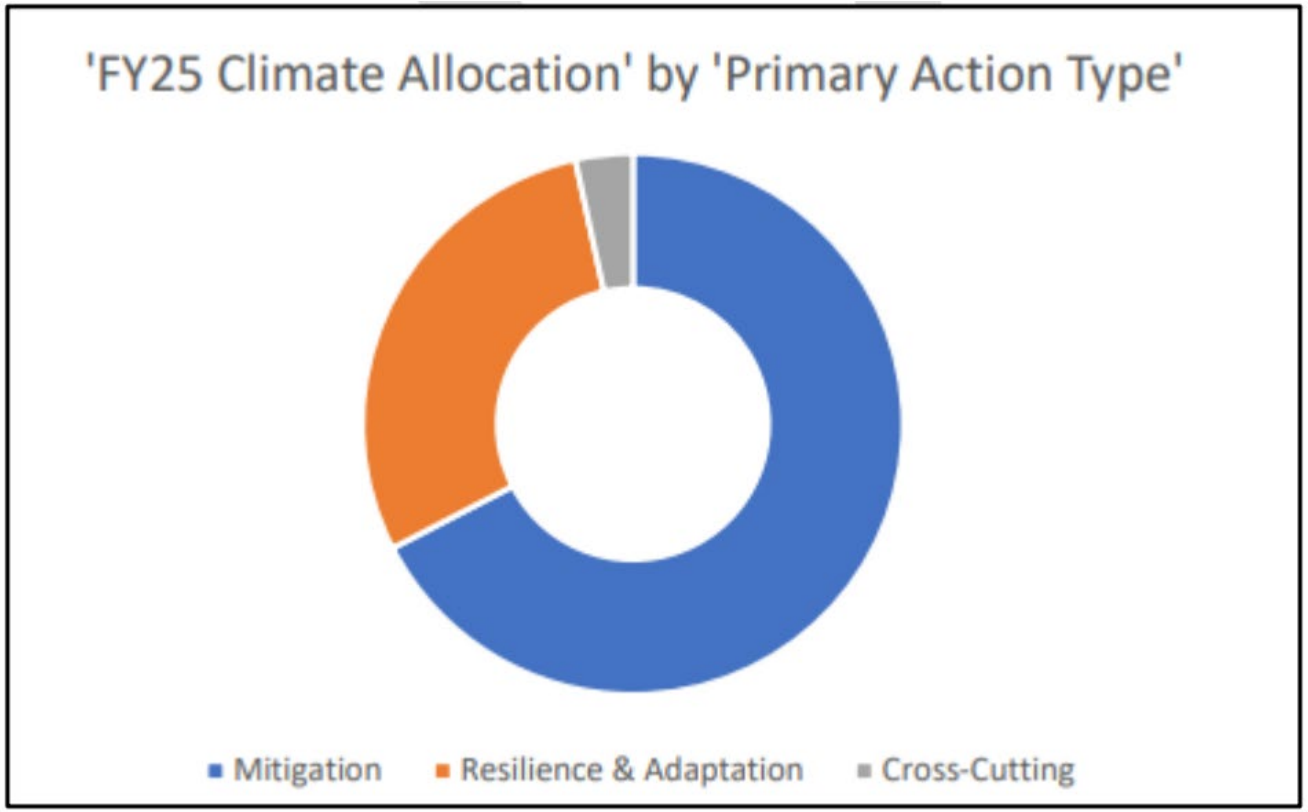
Agenda

- Key areas of climate work
  - Greenhouse gas mitigation
  - Sequestration
  - Adaptation and resilience
- Current funding
  - Federal vs state
  - On-going vs one-time
- Sector-specific examples
- Summary

Key Areas of Climate Work

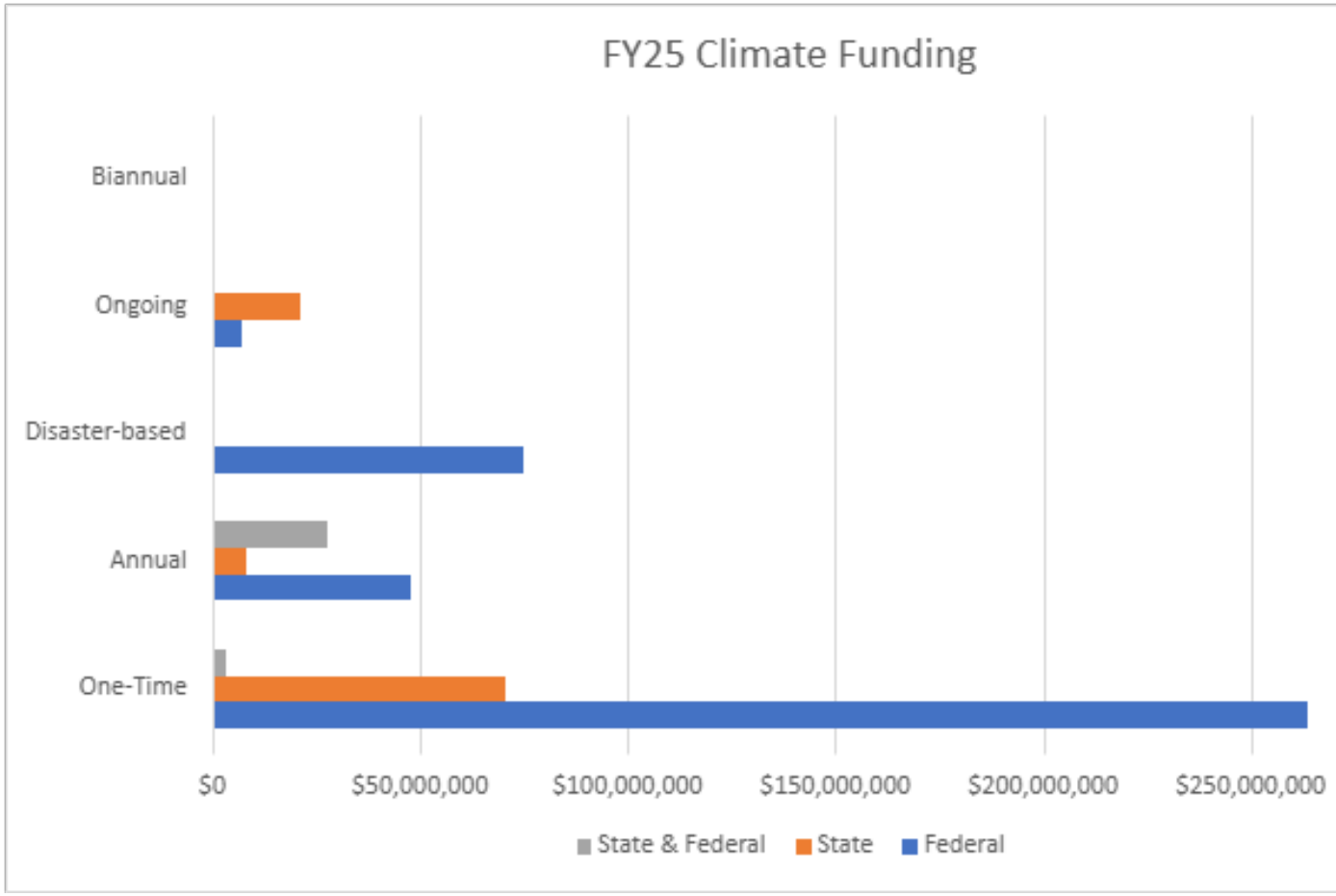
- Greenhouse Gas Mitigation
  - Weatherization
  - Electric panel upgrades
  - Heat pumps and modern wood heat
  - EV incentives and charging infrastructure
- Sequestration
  - Farm and forest conservation
  - Best management practices
- Adaptation and Resilience
  - Targeted buyouts
  - Wetland & floodplain restoration
  - Infrastructure improvements
- Crosscutting
  - Community engagement
  - Training
  - Planning grants



Total funding appropriated and/or spending authorized in FY25:
$524,403,768

Current Funding

- State
  - Community Resilience and Disaster Mitigation Fund (one-time)
  - Home Weatherization Assistance Program (HWAP) (on-going, fuel tax)
  - Community EV Chargers (one-time)
  - Clean Water Enhancement Grants (on-going, Clean Water Fund)
- Federal
  - Solar for All (IRA)
  - FEMA Hazard Mitigation Grant Program (HMGP) (event based)
  - FHWA Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program (IIJA)
  - Municipal Energy Resilience Program (MERP) (ARPA)
  - Forest Legacy

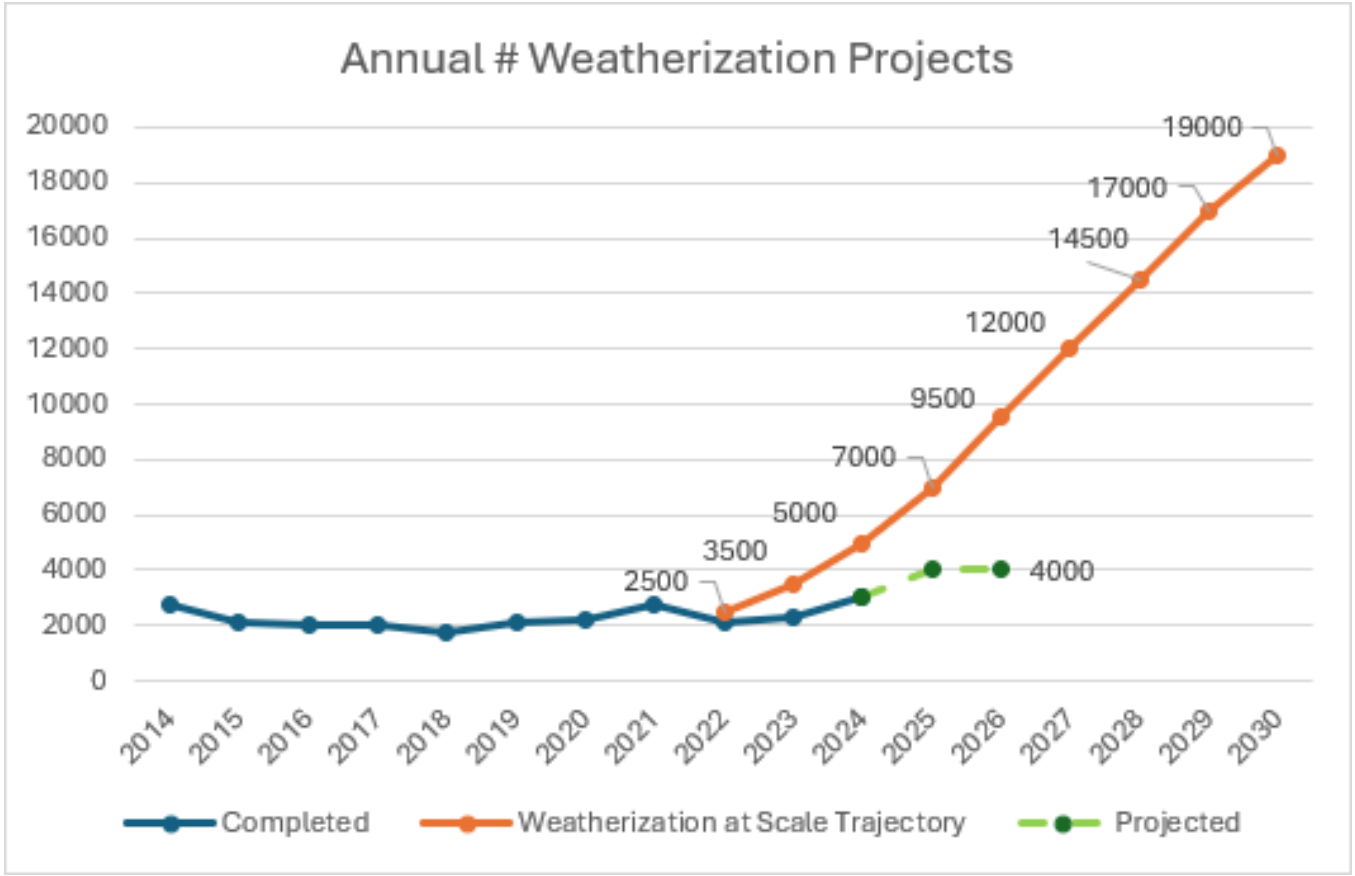


Deeper Dive: Weatherization Funding

	Program	Eligibility	2025	2026	2027	2028	2029
Energy Efficiency Utilities	EVT Market Rate - TEPF	market rate	$ 5,930,596	$ 6,043,101	$ 4,282,293	$ 4,078,606	$ 4,200,436
	EVT LI - TEPF	under 80% AMI	$ 1,576,487	$ 1,606,394	$ 1,138,331	$ 1,084,186	$ 1,116,571
	VGS Market Rate	market rate	$ 2,815,003	$ 2,504,536	$ 2,483,001	$ 2,498,643	$ 2,442,733
	VGS LI	under 80% AMI	$ 244,487	$ 357,674	$ 359,766	$ 361,335	$ 345,735
Low Income WAP	OEO Weatherization Assistance Program - State funds from Fuel Tax	under 80% AMI	$ 10,500,000	$ 10,500,000	$ 10,500,000	$ 10,500,000	$ 10,500,000
	OEO Weatherization Aassistance Program - DOE Annual WAP funds	under 80% AMI	$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 1,600,000
One-time Federal Funds	ARPA Moderate Income (pending reversions, was ~$10M/yr)	under 120% AMI	$ 10,000,000	$ 5,000,000	0	0	0
	ARPA Low-income	under 80% AMI	$ 2,163,229	$ 2,319,301	0	0	0
	Inflation Reduction Act *Home Efficiency Rebates*	under 80% AMI	$ 3,625,000	$ 7,250,000	$ 7,250,000	$ 7,250,000	$ 3,625,000
	Bipartisan Infrastructure Law *supplemental WAP funding*	under 80% AMI	$ 6,300,000	$ 6,000,000	0	0	0
	Total Annual		**$ 44,754,802**	**$ 43,181,006**	**$ 27,613,391**	**$ 27,372,770**	**$ 23,830,475**

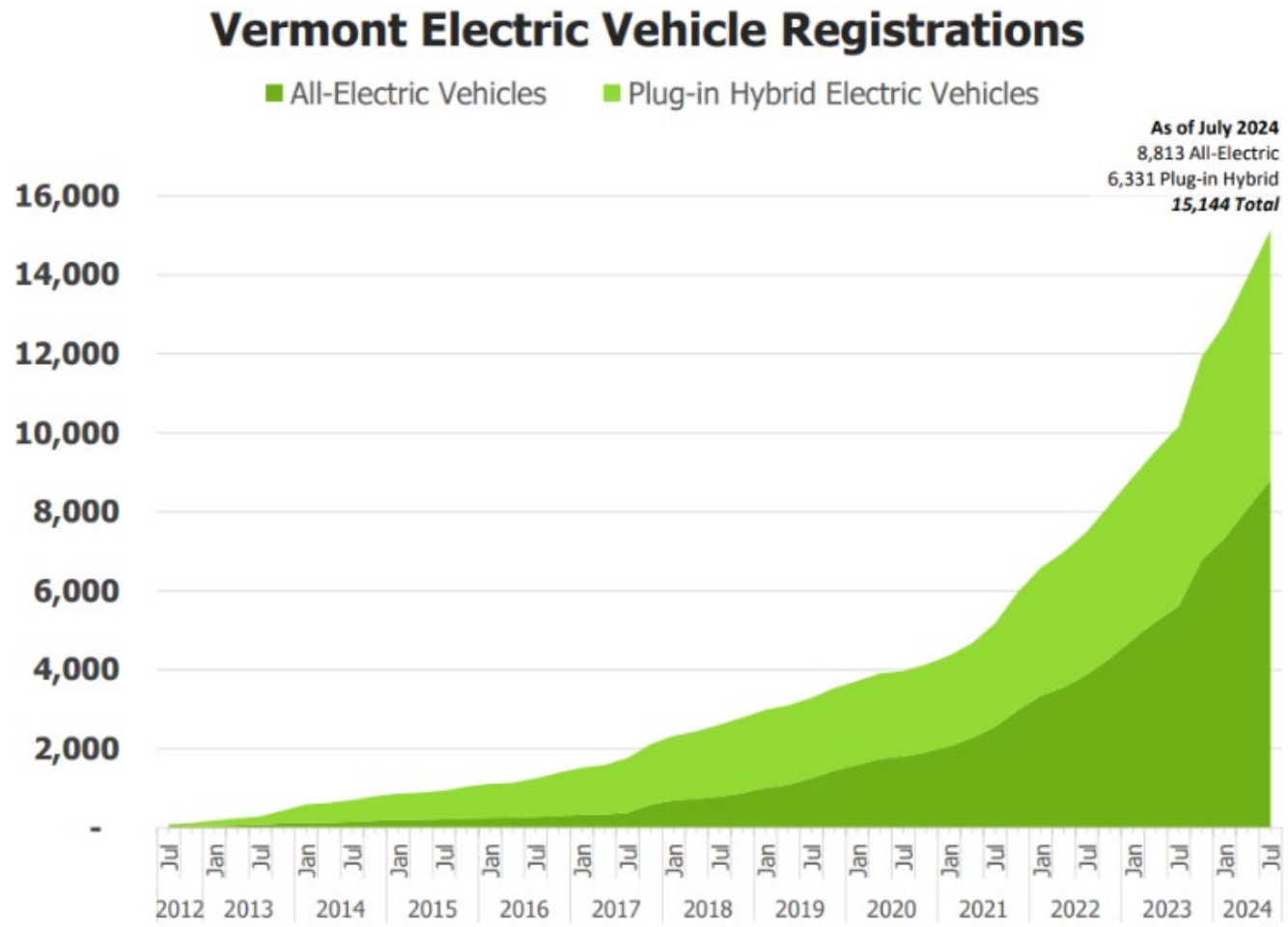
Deeper Dive: Weatherization Funding

- Current average cost for weatherization (incentive amounts + program costs):
  - $12K for a low-income household (<80% AMI)
  - $9K for moderate-income household (<120% AMI)
  - $4K for market rate
- Roughly 3/4s of homes weatherized annually are low- or moderate-income households



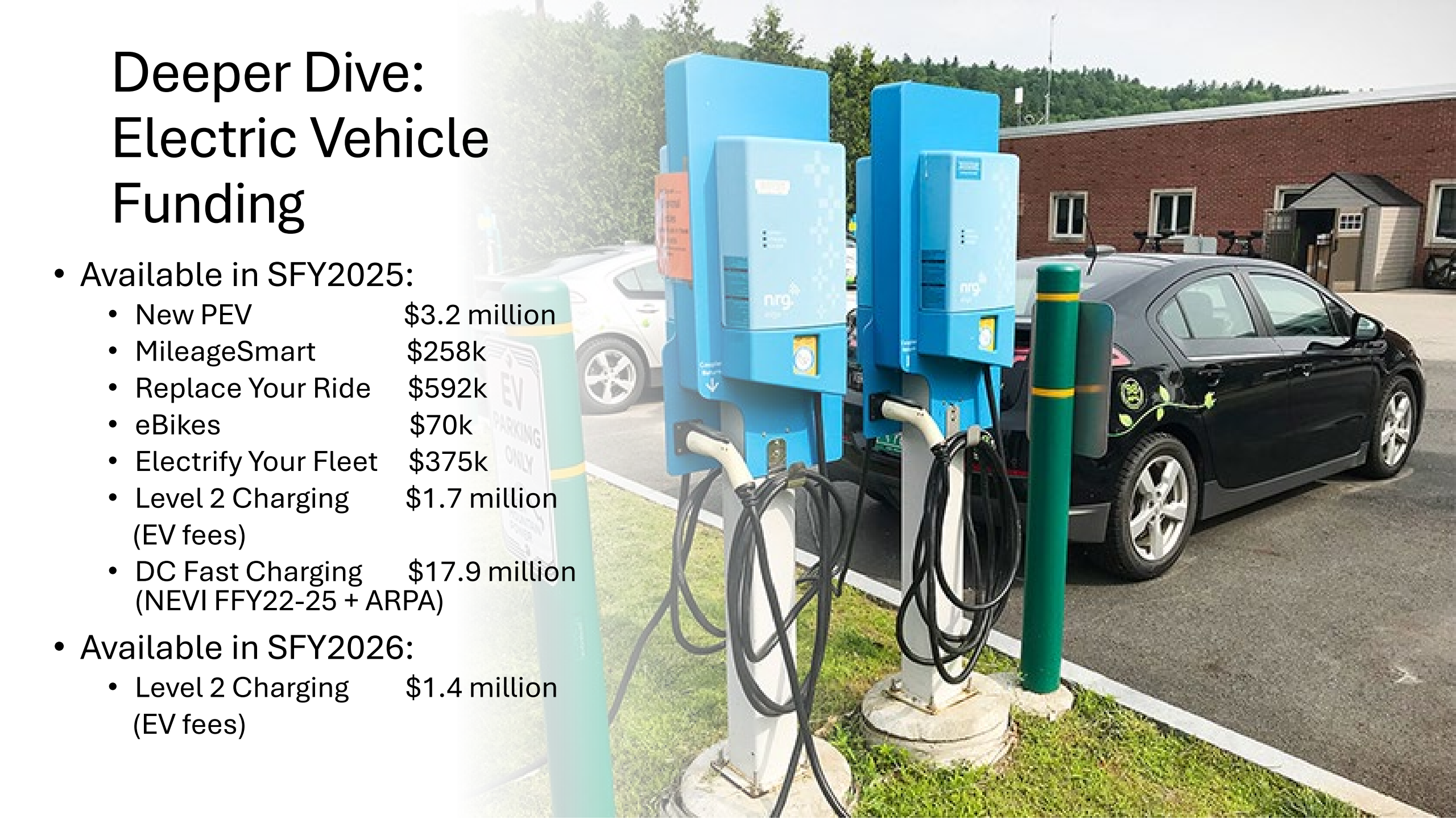
Deeper Dive: Electric Vehicles

- As of July 2024, there were:
  - More than 15,000 light-duty EVs registered in VT
  - 32 medium and heavy duty vehicles (i.e., buses, trucks)
- To meet GWSA targets, by 2030 there need to be:
  - 116,500 light-duty EVs
  - 9,200 medium- and heavy-duty EVs



Deeper Dive: Electric Vehicle Funding

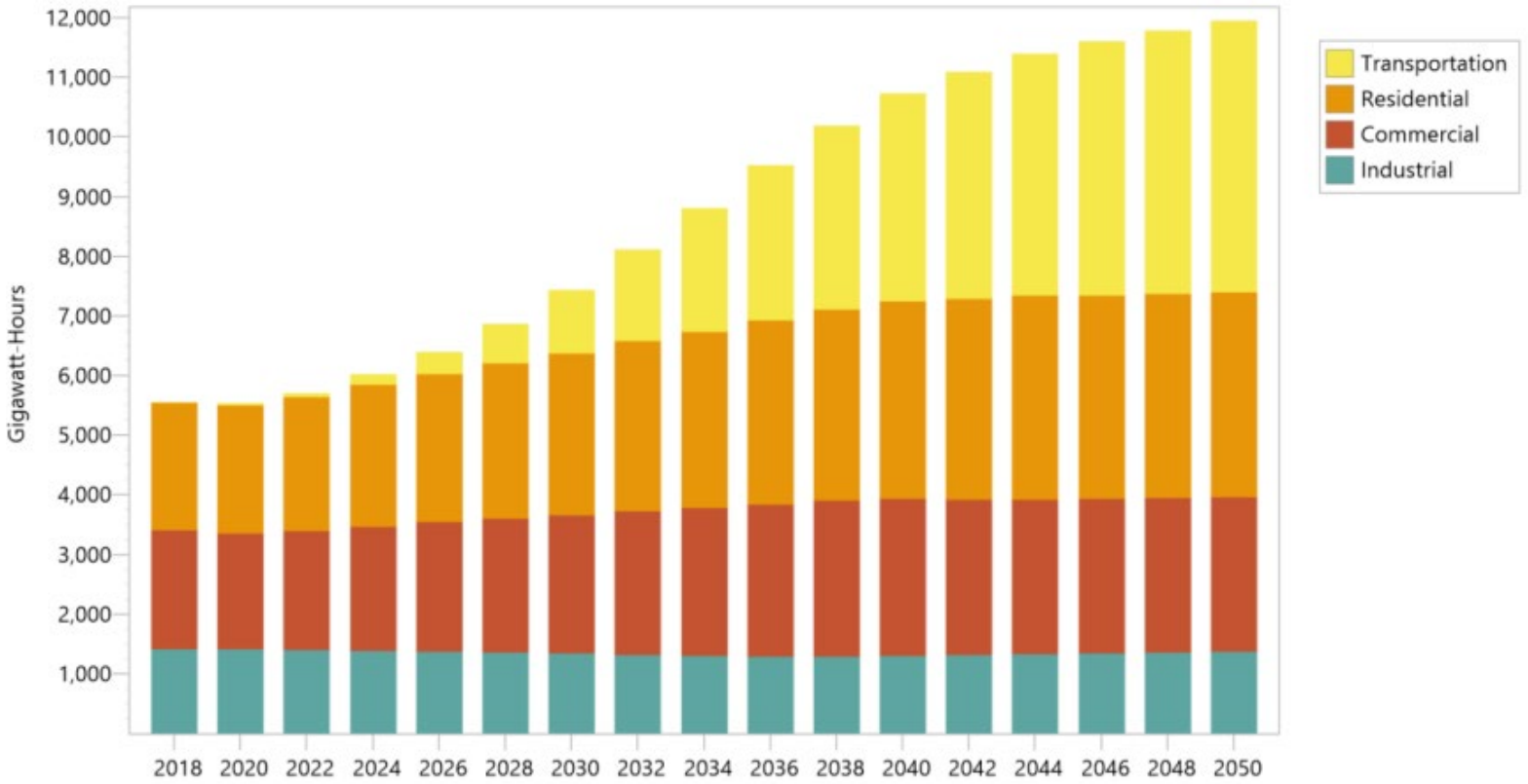
- Available in SFY2025:
  - New PEV $3.2 million
  - MileageSmart $258k
  - Replace Your Ride $592k
  - eBikes $70k
  - Electrify Your Fleet $375k
  - Level 2 Charging $1.7 million (EV fees)
  - DC Fast Charging $17.9 million (NEVI FFY22-25 + ARPA)
- Available in SFY2026:
  - Level 2 Charging $1.4 million (EV fees)



Filling (Some of) the Gap

- H.289 included the following proposals for bridge funding:
  - Redirect $15M of the revenues collected by the energy efficiency charge to:
    - Low- and moderate-income weatherization
    - Heat pump deployment
    - Energy Navigators Program delivered through the Community Action Agencies
  - Allocate RGGI proceeds in excess of $6M annually to the Agency of Transportation for vehicle electrification (incentives and charging infrastructure)

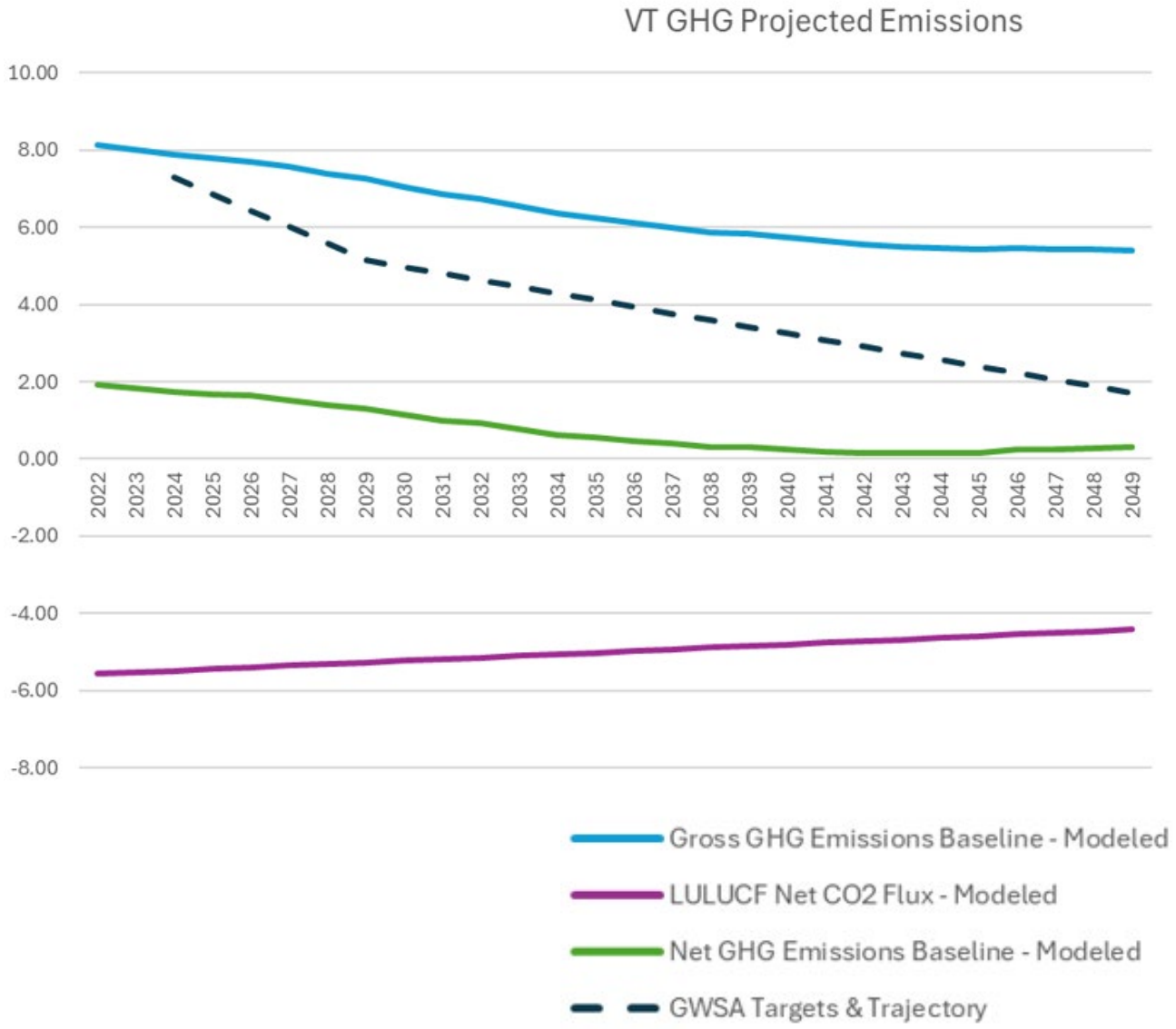
Importance of Electrification Value Proposition



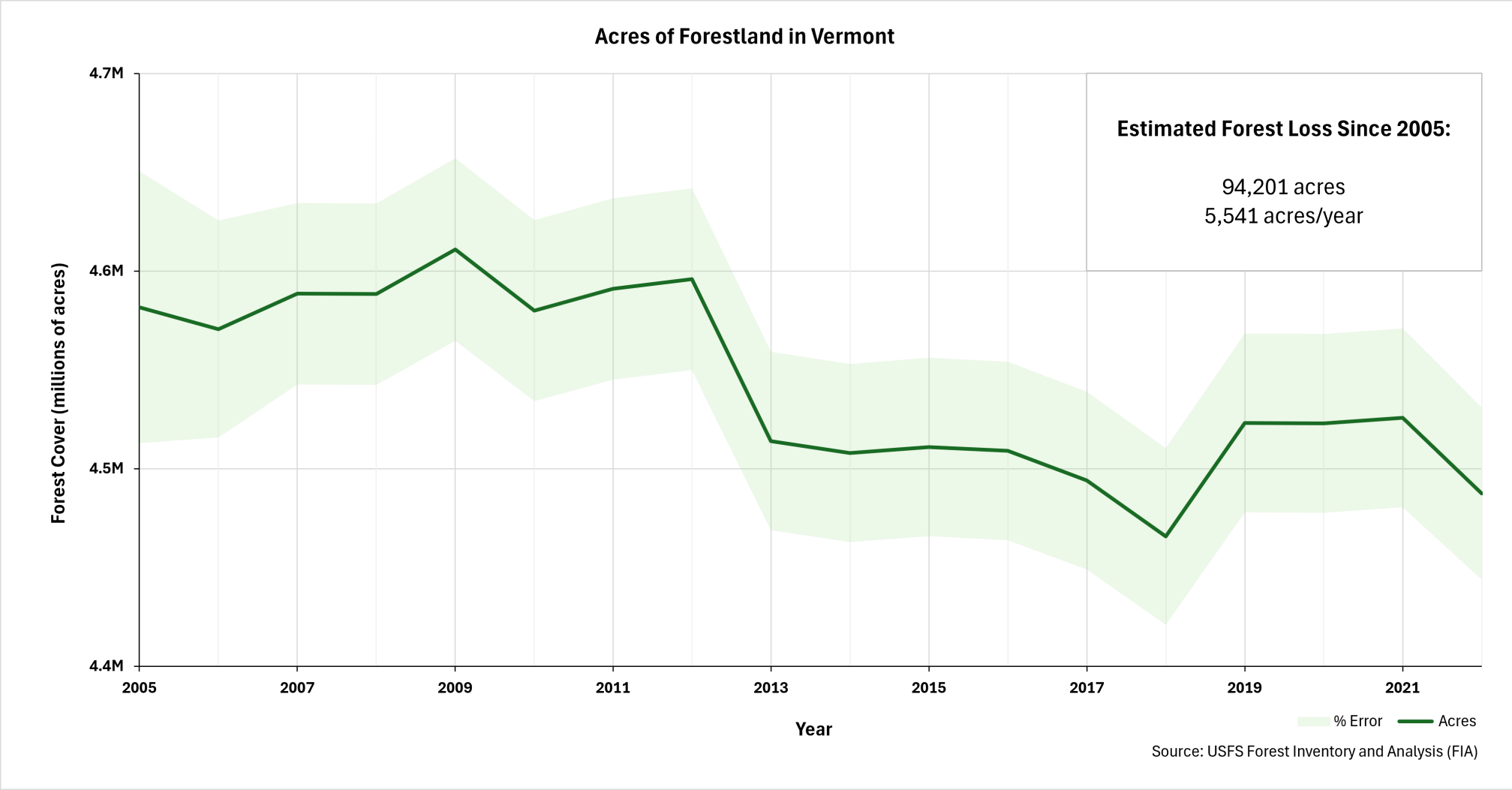
- Demand for electricity will increase as electrification occurs
  - Projected to roughly double between 2020 and 2050
- Initiatives that raise the cost of electricity undermine price signals that motivate households to transition away from fossil fuels

Deeper Dive: Sequestration

- Achieving our long-term climate pollution goals requires both measures to reduce emissions and measures to enhance carbon sequestration and storage
  - Reducing forest land conversion
  - Enhanced agriculture management practices
  - Tree planting/ reforestation



Deeper Dive: Sequestration

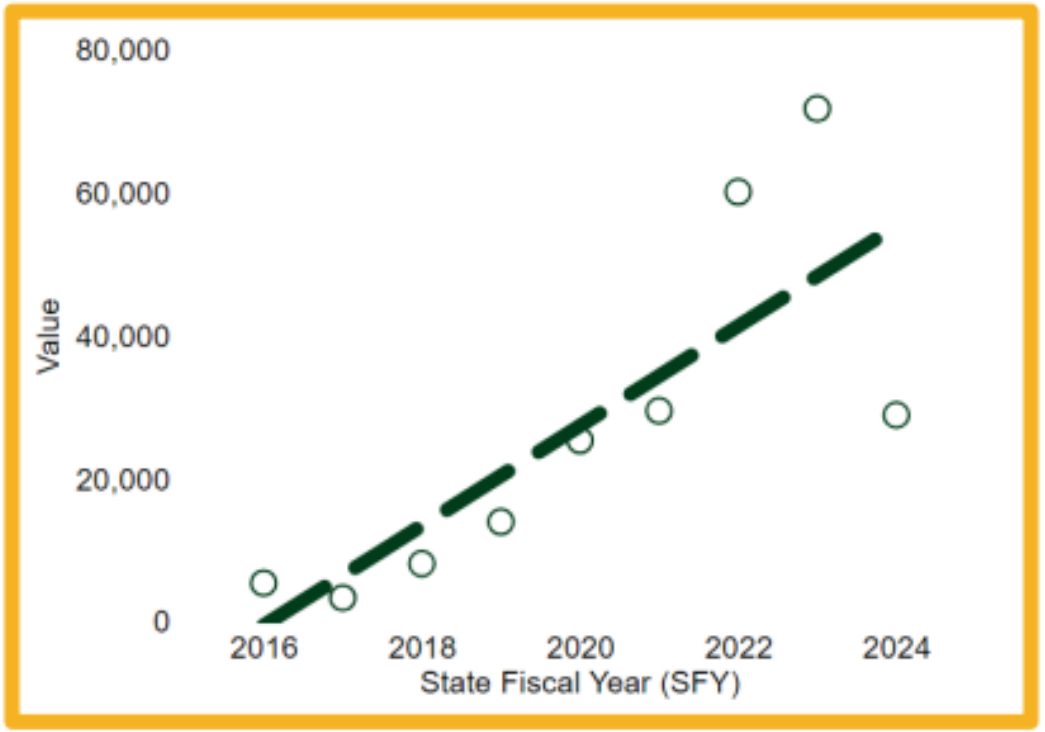


Deeper Dive: Sequestration

- Act 59 (2023) “30 x 30” inventory found:
  - 1.58 million acres (~27%) of permanently conserved lands
    - Includes nearly 370,000 acres owned by ANR
  - 2.4 million acres of working lands are enrolled in the State’s Use Value Appraisal program
    - Some of these are also permanently conserved
  - Reaching 30 x 30 requires 185,000 additional acres to be conserved
    - Average cost per acre varies considerably, generally ranging between $1,000 and $4,000

Deeper Dive: Sequestration Funding

- Forestland conservation
  - Land and Water Conservation Fund ($2.1 million annually))
  - Forest Legacy ($2 million annually)
  - VHCB ($2-3 million annually, plus an additional $4-5 million for ag land conservation)
- Agricultural management practices
  - Many BMPs implemented for water quality also have climate benefits (i.e., improving soil quality and manure management)
  - Investments of State Clean Water, USDA-NRCS and LCBP funds currently average $30M per year



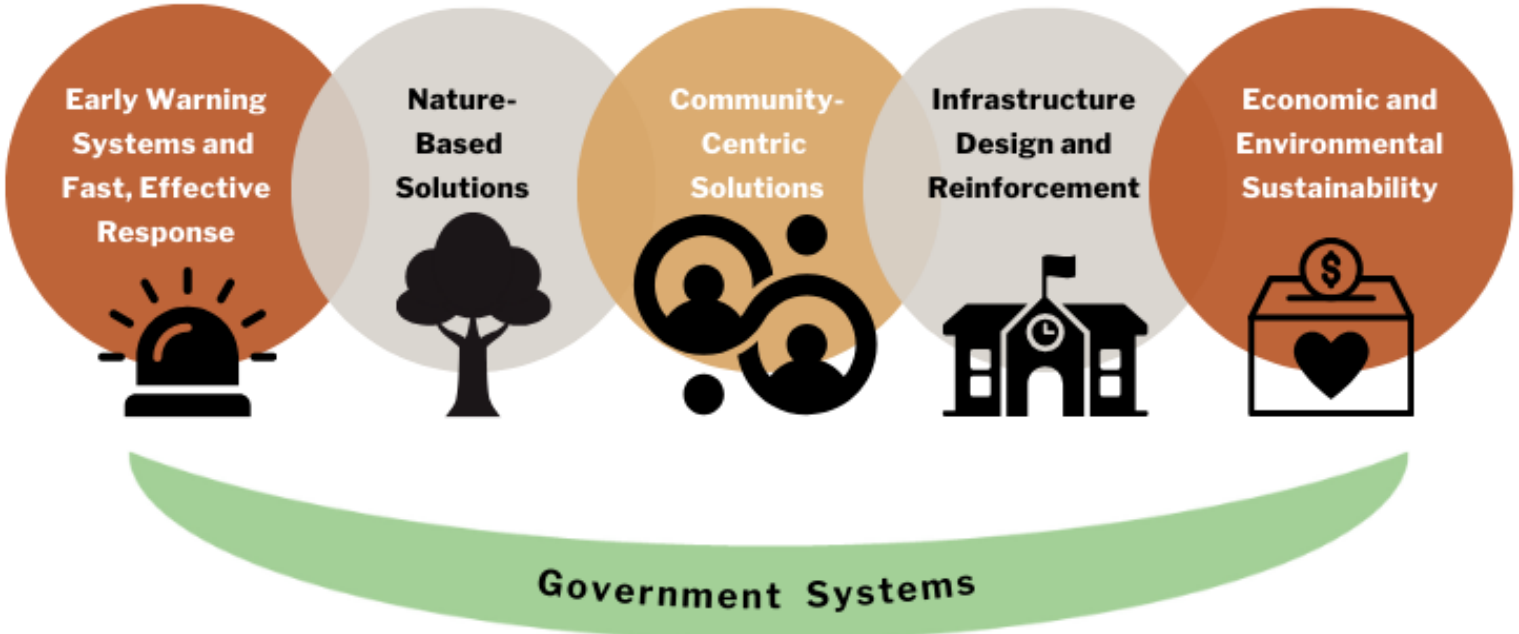
246,915 acres of agricultural conservation practices implemented

Deeper Dive: Resilience and Adaptation

- Since Tropical Storm Irene, Vermont has received more than 20 major disaster declarations effecting every county
  - State received more than $500 million in federal post-disaster assistance
  - Funds are used to both build back and reduce future hazards
- Numerous state programs also help improve resilience
  - Range from wetland restoration to standards for bridges and culverts to incentives for municipal zoning

Deeper Dive: Resilience and Adaptation

- Challenging to develop numeric targets for adaptation
  - Funding tends to be “event based”
  - Initial Climate Action Plan includes numerous recommendations to improve resilience, but program design efforts (i.e., Clean Heat, Cap and Invest) have focused on GHG emissions
- Developing *Resilience Implementation Strategy* to serve as a companion to the Climate Action Plan



Summary

- Significant investment in climate action over the past 5 years - more than $1B
  - Roughly 2/3s invested in GHG mitigation; 1/3 invested in adaptation and resilience
  - Helped drive growth in work force capacity and practice uptake
- Majority of funding (both federal and state) has been one-time or limited duration monies (i.e., ARPA, IIJA, IRA, disaster recovery)
  - Risk losing capacity absent sustained investment
- Successful implementation of the Global Warming Solutions Act requires significant, sustained resources