



Draft Triennial Plan VI Beneficial Electrification Plan

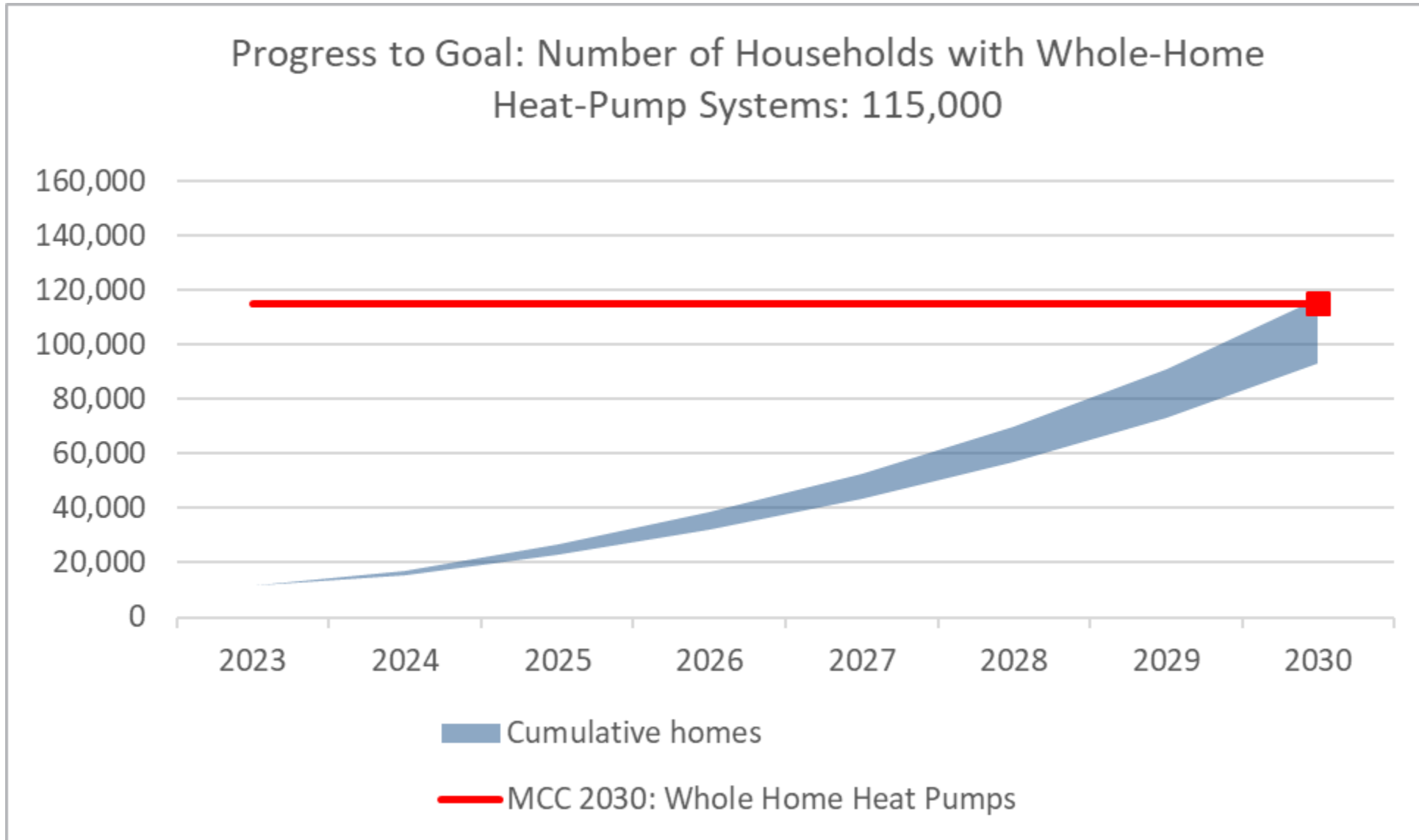
EMT Board Meeting

April 24, 2024

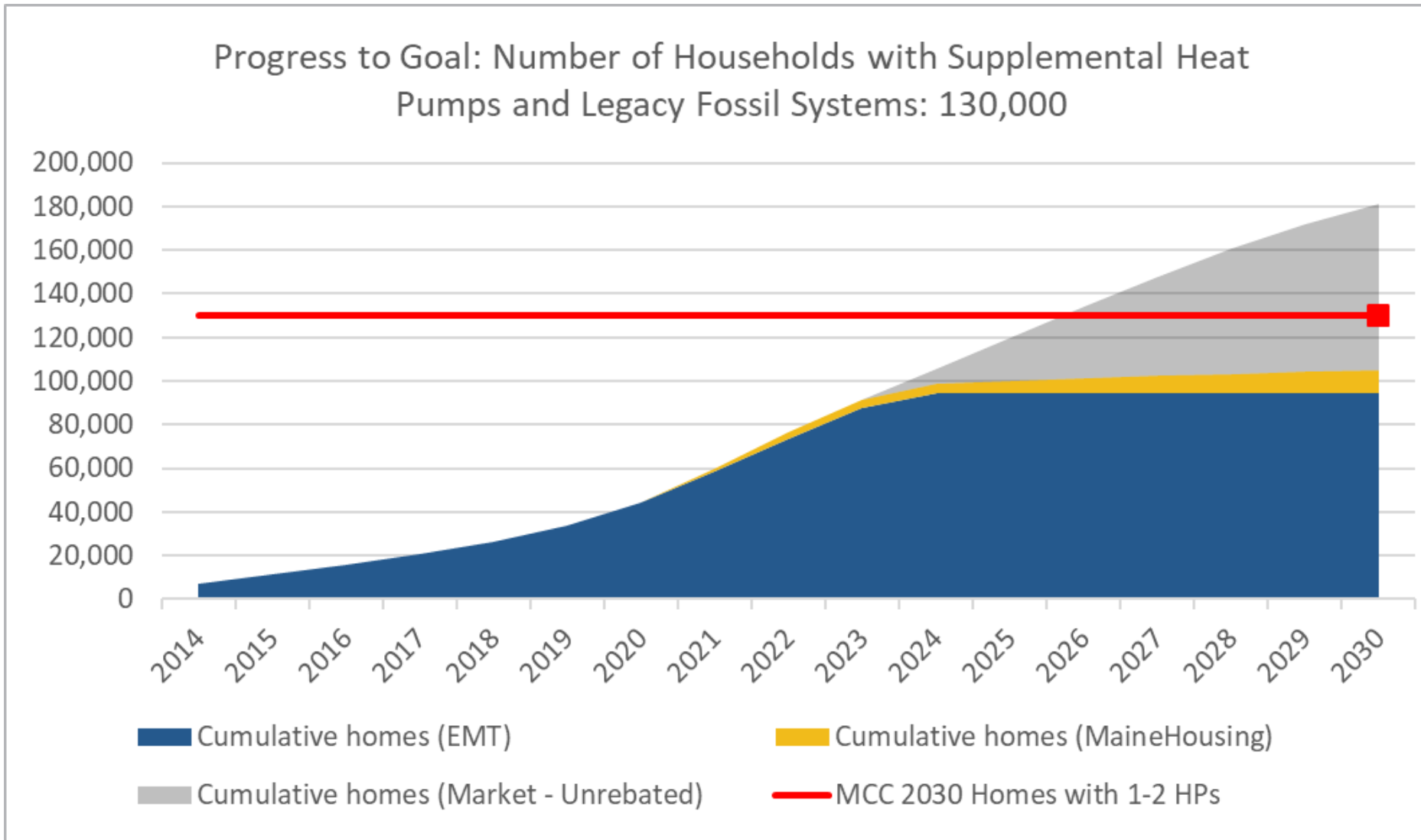
Maine Climate Action Plan goals codified in the Efficiency Maine Trust Act § 10104(4)(F)

- Heat Pumps
 - By 2030, Number of Households with Supplemental Heat Pumps and Legacy Fossil Systems: **130,000**
 - By 2030, Number of Households with Whole-Home Heat-Pump Systems: **115,000**
- Electric Vehicles
 - By 2030, Number of Light-duty EVs on the Road: **219,000**

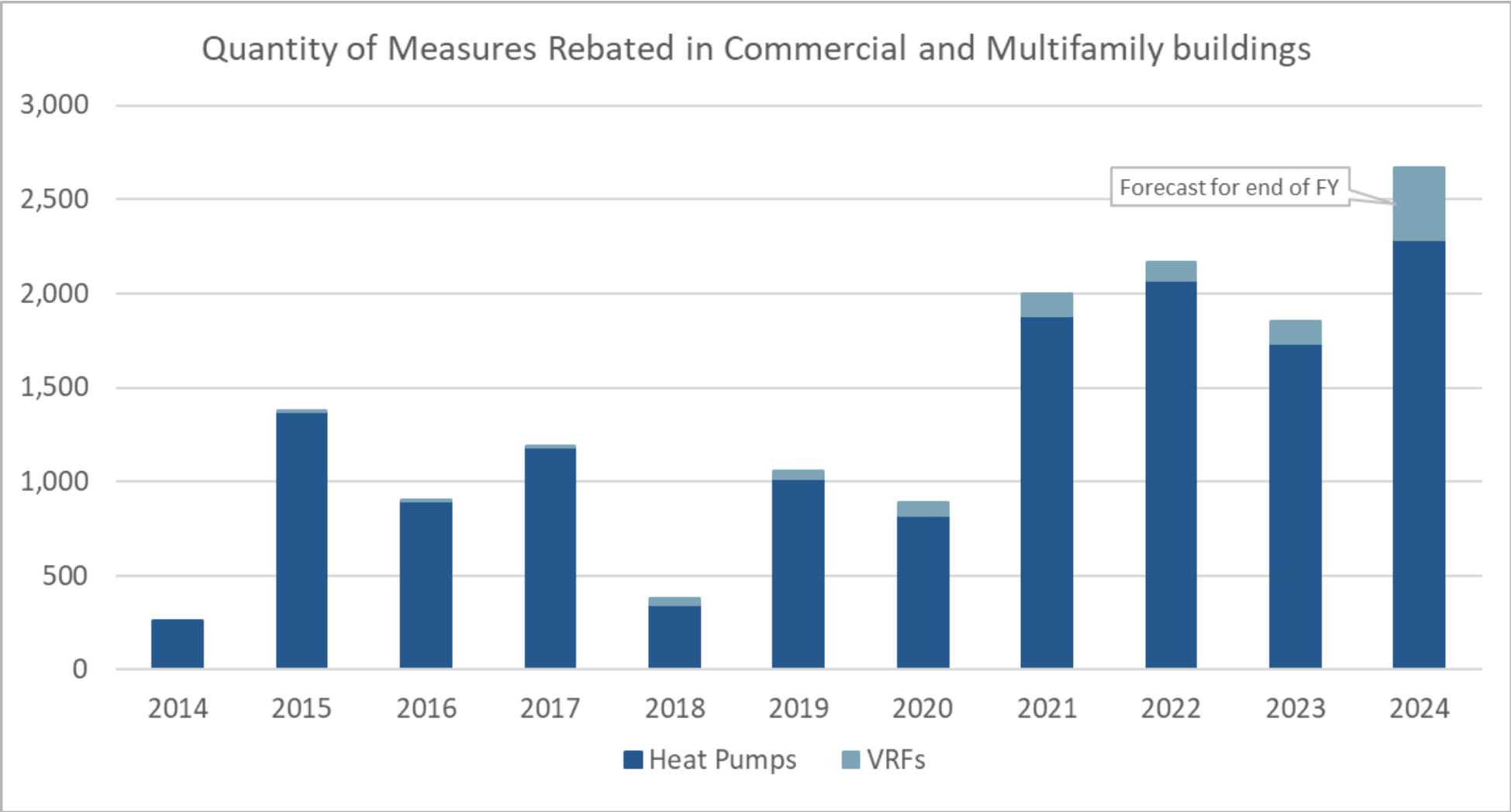
Trajectory: Whole Home Heat Pumps



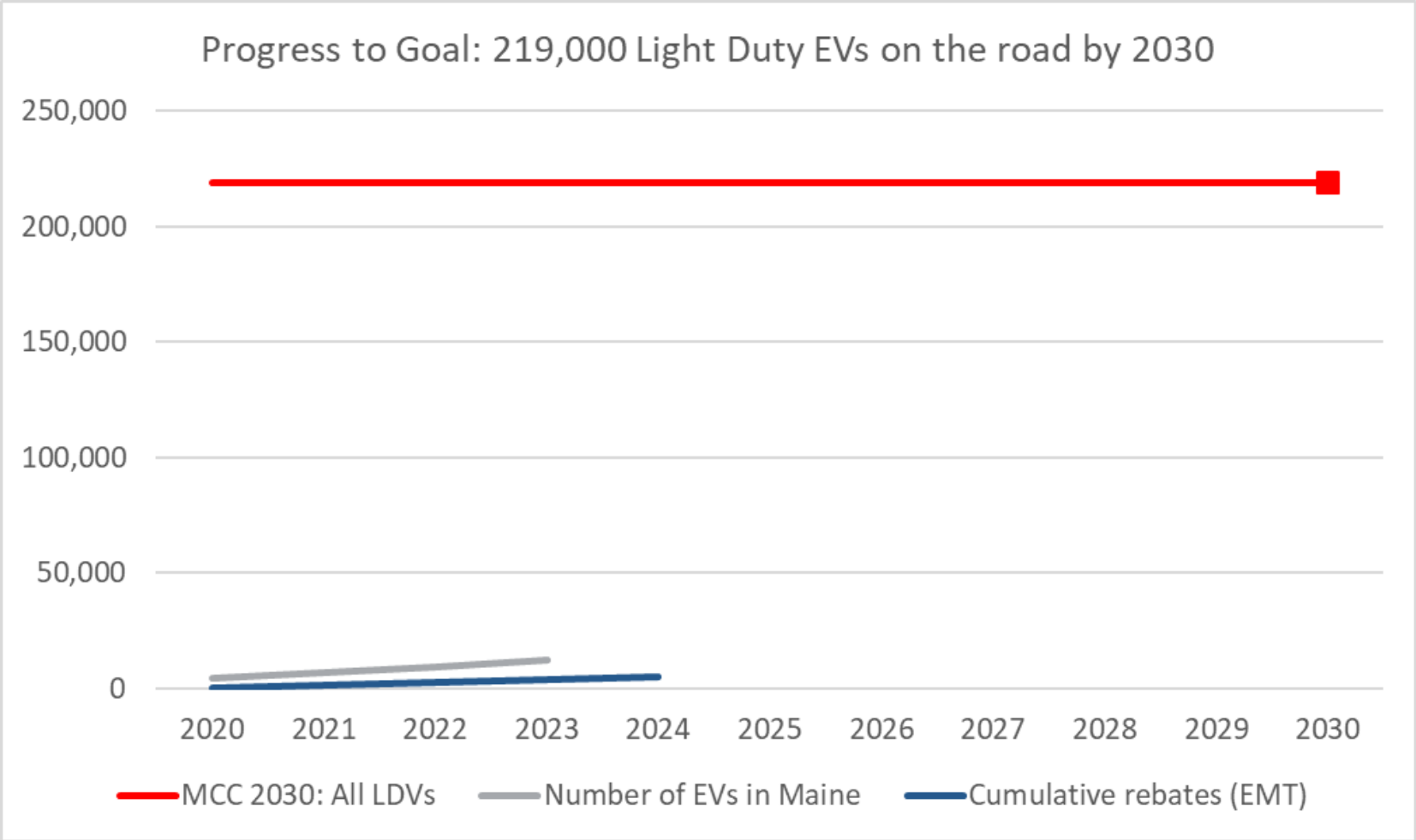
Trajectory: Residential Supplemental Heat Pumps



Progress: Commercial Heat Pumps and VRFs



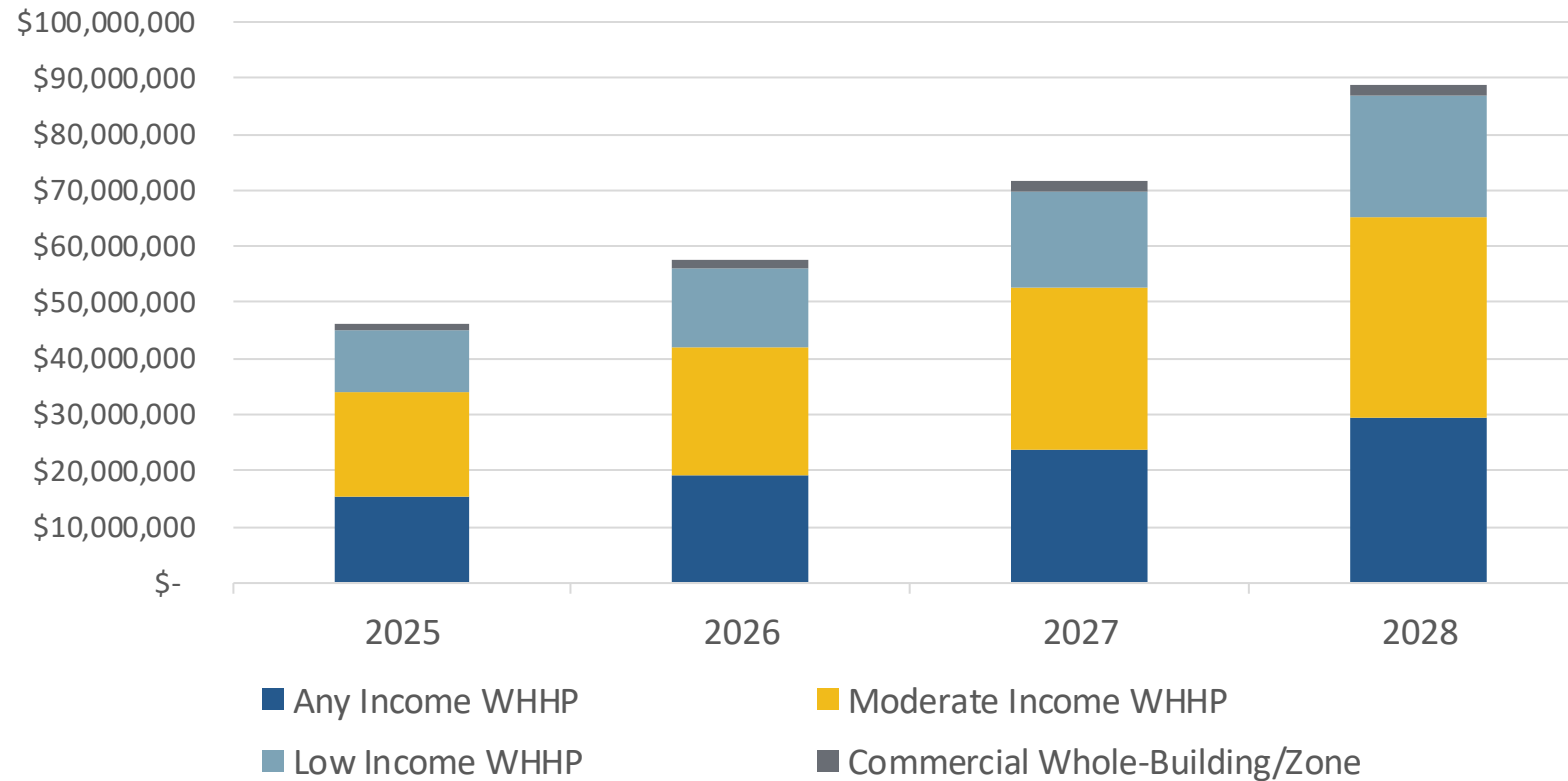
Trajectory: Light Duty Electric Vehicles



3. Preliminary budgets for Triennial Plan VI

Procurement Budgets for Whole-Home and Whole-Building Heat Pumps

Projected MACE Budgets for Heat Pumps to remain on track for 2030 Whole Home goals



Estimated MACE Electrification Budgets for Heat Pumps

Measure	Estimated project count			Estimated electric budgets		
	FY2026	FY2027	FY2028	FY2026	FY2027	FY2028
Whole-home Heat Pump (Any-income)	4,500	5,625	7,000	\$19,085,000	\$23,731,250	\$29,410,000
Whole-home Heat Pump (Moderate-income)	3,800	4,750	5,900	\$23,050,000	\$28,750,000	\$35,650,000
Whole-home Heat Pump (Low-income)	1,700	2,125	2,700	\$13,918,000	\$17,335,000	\$21,958,000
C&I Prescriptive Beneficial Electrification Measures*	832	864	905	\$1,632,000	\$1,693,200	\$1,774,800

**has significant offsetting funding sources. Does not include Variable Refrigerant Flow (does not reliably reduce rates) or Packaged Terminal Heat Pump (categorized as energy efficiency) measures.*

Measure screening – Heat pumps and VRFs

(Preliminary Results based on FY 2025 Interim Plan)

Determination of Measure Cost Effectiveness and Reliable Reduction of Rates			
Measure	Reliably Reduces Rates?	Benefit-Cost Ratio	Included in MACE Budget?
Whole-home Heat Pump (Any-income)	Yes	1.31	Yes
Whole-home Heat Pump (Moderate-income)	Yes	1.28	Yes
Whole-home Heat Pump (Low-income)	Yes	1.26	Yes
Whole-home Heat Pump (Manufactured Home Pilot)	No	1.46	No
Supplemental Heat Pump (Low-income)	No	1.56	No
Rooftop Unit Heat Pump	Yes	1.20	Yes
Multifamily Whole-building/Zone Heat Pump	Yes	1.92	Yes
Variable Refrigerant Flow (VRF) (Commercial)	No	1.47	No
Commercial Whole-Zone/Building Heat Pump	Yes	2.34	Yes

Measure screening – Electric vehicles

(Preliminary results from FY 2025 Interim Plan)

Determination of Measure Cost Effectiveness and Reliable Reduction of Rates

Measure	Reliably Reduces Rates?	Benefit-Cost Ratio	Included in MACE Budget?
Battery Electric Vehicle (Any-income)	Yes	2.52	Yes
Plug-in Hybrid Electric Vehicle (Any-income)	Yes	2.55	Yes
Battery Electric Vehicle (Moderate-income)	No	2.52	No
Battery Electric Vehicle (Low-income)	No	2.52	No
Plug-in Hybrid Electric Vehicle (Moderate-income)	No	2.52	No
Plug-in Hybrid Electric Vehicle (Low-income)	No	2.55	No
Battery Electric Vehicle (Commercial)	No	1.67	No
Plug-in Hybrid Electric Vehicle (Commercial)	No	2.43	No

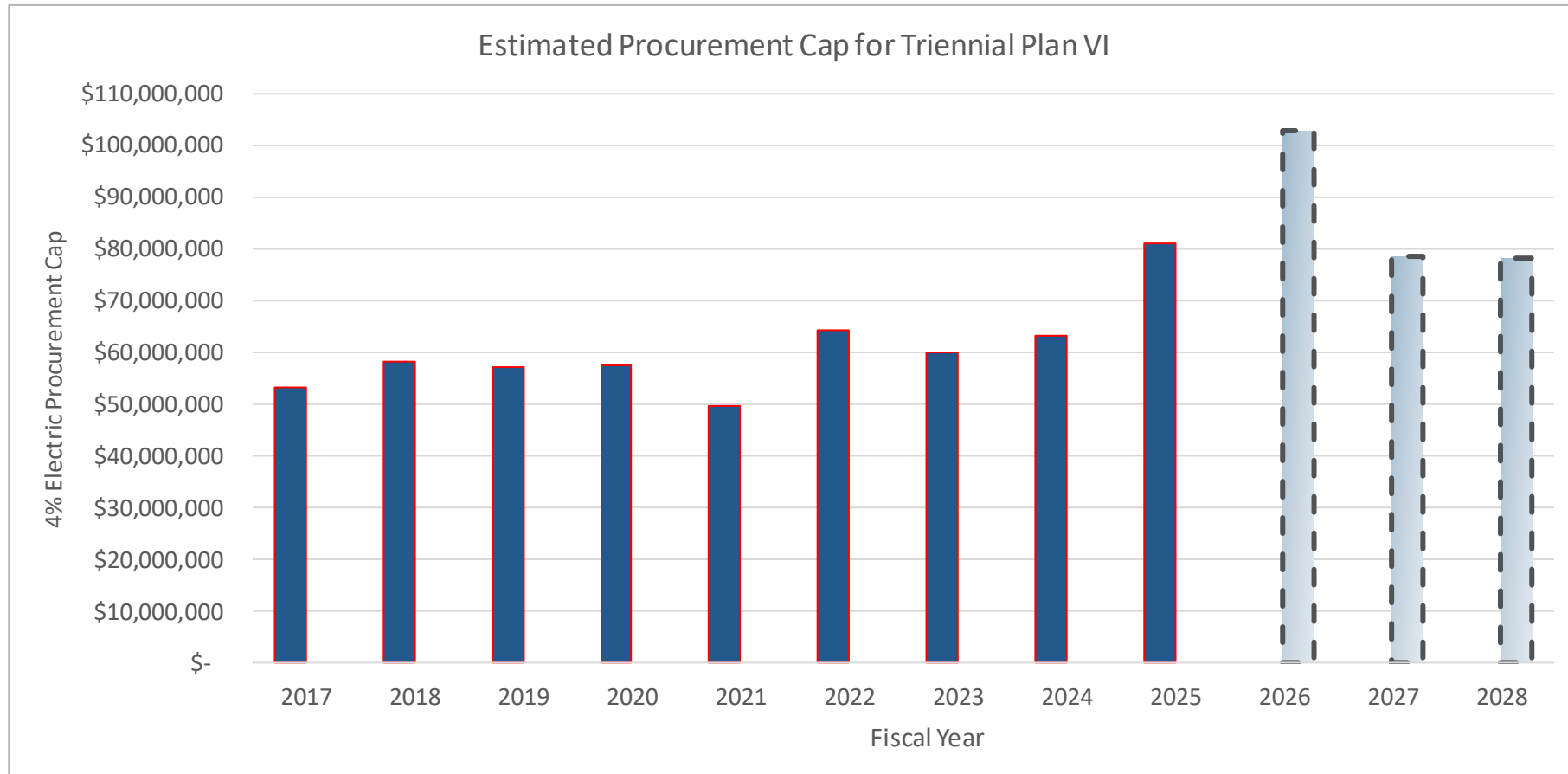
Light-Duty Electric Vehicle Market Study

- Bottom-up approach
 - Regression against other jurisdictions using variables including climate, demographics, commuting, availability of public charging, and more
- Desired outcomes
 - Estimate impact of program activity on market lift
 - Estimate future adoption of light duty electric vehicles in Maine
 - Estimate quantity of vehicles rebated at different rebate amounts
 - Gather information on the future of electric vehicle supply and incremental cost
- Timing
 - Final report in early to mid-July

Efficiency Maine will seek to offset electric procurement with other sources of funds

- Regional Greenhouse Gas Initiative (RGGI)
- Forward Capacity Market (FCM)
- Federal Grants

Forecasted Electric Procurement Cap



Projected cap is estimated based on a proxy to residential rates occurring 3 years prior to each fiscal year