

7/14/2022

Efficiency Vermont Demand Resource Plan Update

**VSPC Forecasting
Subcommittee Meeting**

Jay Pilliod

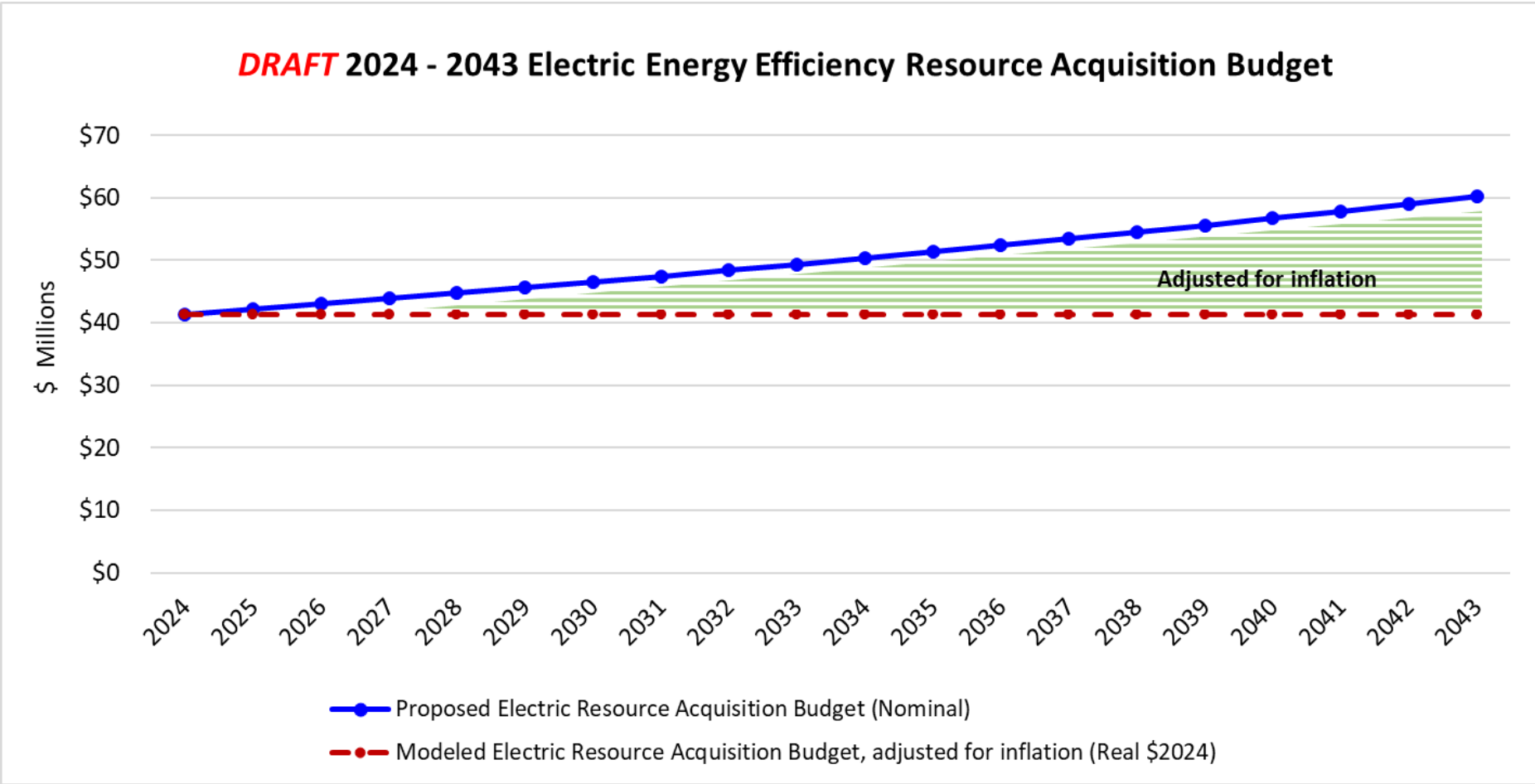
Director of Portfolio Planning

Efficiency
Vermont

Preliminary Electric (EEC) and Thermal (TEPF) Modeling Assumptions

- 20 year (EEC) and 10 year (TEPF) *Draft* Budgets
- Residential, C&I, and low income sector budget splits
- Market and technology impacts:
 - RBES/CBES code update
 - Updated CCHP forecast
 - Lighting market impacts

Draft EEC Budget



Target Annual EEC RA Budget for Model: \$41.3M Flat
2023 Estimated Budget: \$40.5M

EEC Residential, C&I, and Low Income Budget Sector Splits

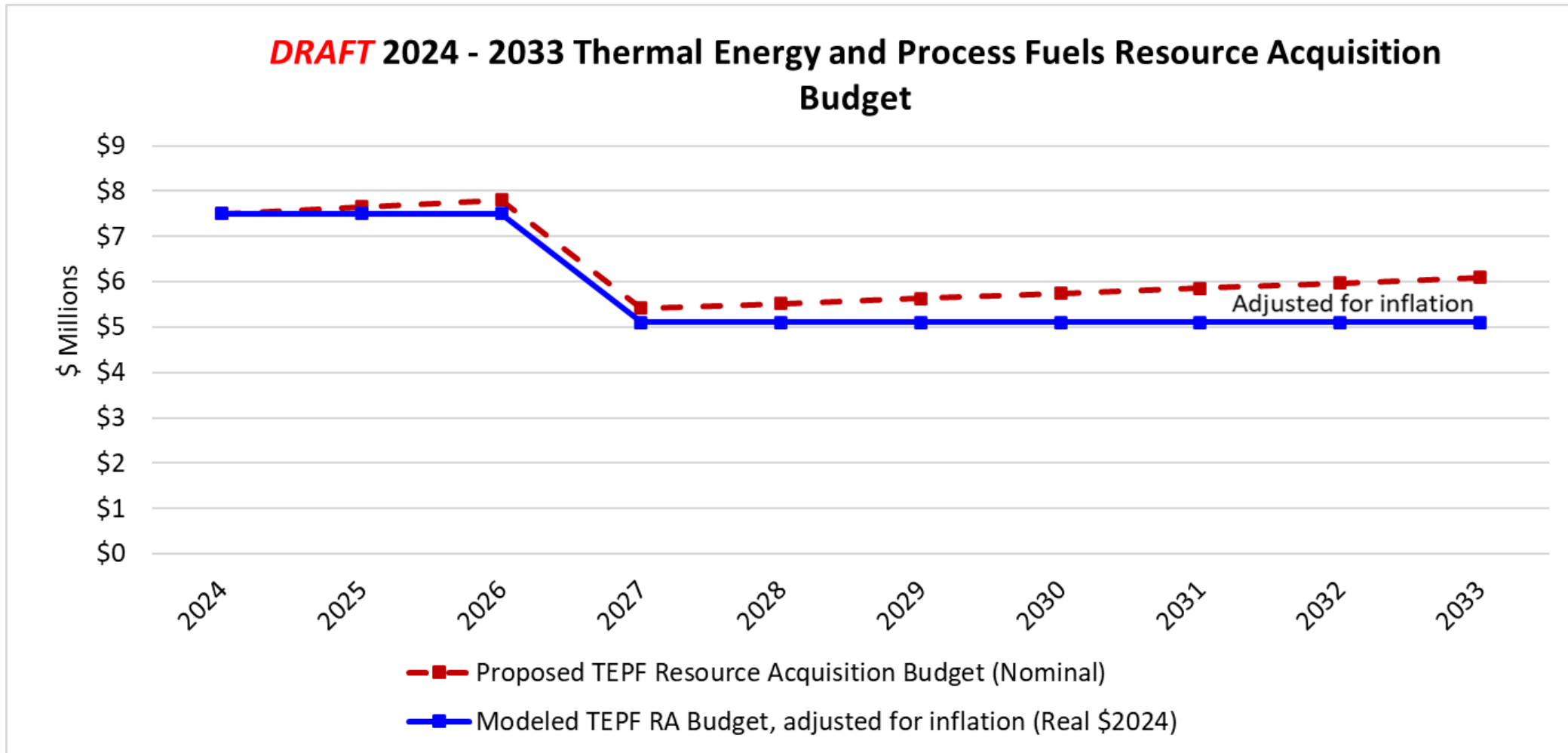
EEC Sector Budgets					
	Draft EEC Annual RA Budget	% Residential	Annual Residential Budget	% C&I	Annual C&I Budget
2024-2032	\$41.3M	46%	\$19.0M	54%	\$22.3M
2033-2043	\$41.3M	48%	\$19.8M	52%	\$21.5M

Last DRP had 2024-2027 RES % at 43% then increasing to 48% by 2033

	Draft EEC Annual RA Budget	% Low Income	Annual Low Income Budget
2024-2043	\$41.3M	12.1%	\$5.0M

Last DRP set low income budget target at 11%

Draft TEPF Budget

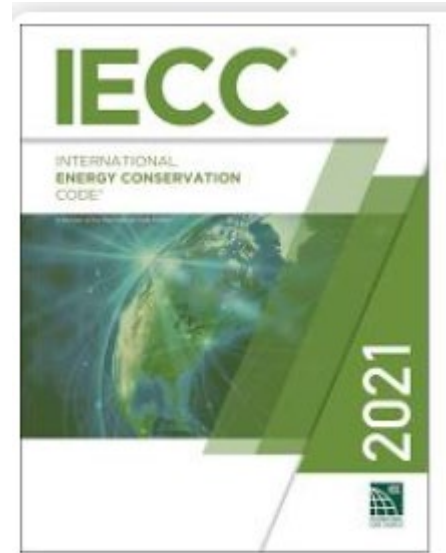


TEPF Residential, C&I, and Low Income Budget Sector Splits

TEPF Sector Budgets					
	Draft TEPF Annual RA Budget	% Residential	Annual Residential Budget	% C&I	Annual C&I Budget
2024-2026	\$7.5M	75%	\$5.6M	25%	\$1.9M
2027-2033	\$5.1M	75%	\$3.8M	25%	\$1.3M

	Draft TEPF Annual RA Budget	% Low Income	Annual Low Income Budget
2024-2026	\$7.5M	21.0%	\$1.6M
2027-2033	\$5.1M	21.0%	\$1.1M

2021-2023 TEPF budget is \$7M per year. Same percentage assumptions for Res, C&I, and Low Income as shown here.



Market and Technology Impacts

RBES and CBES Code Update Impact on Energy Savings

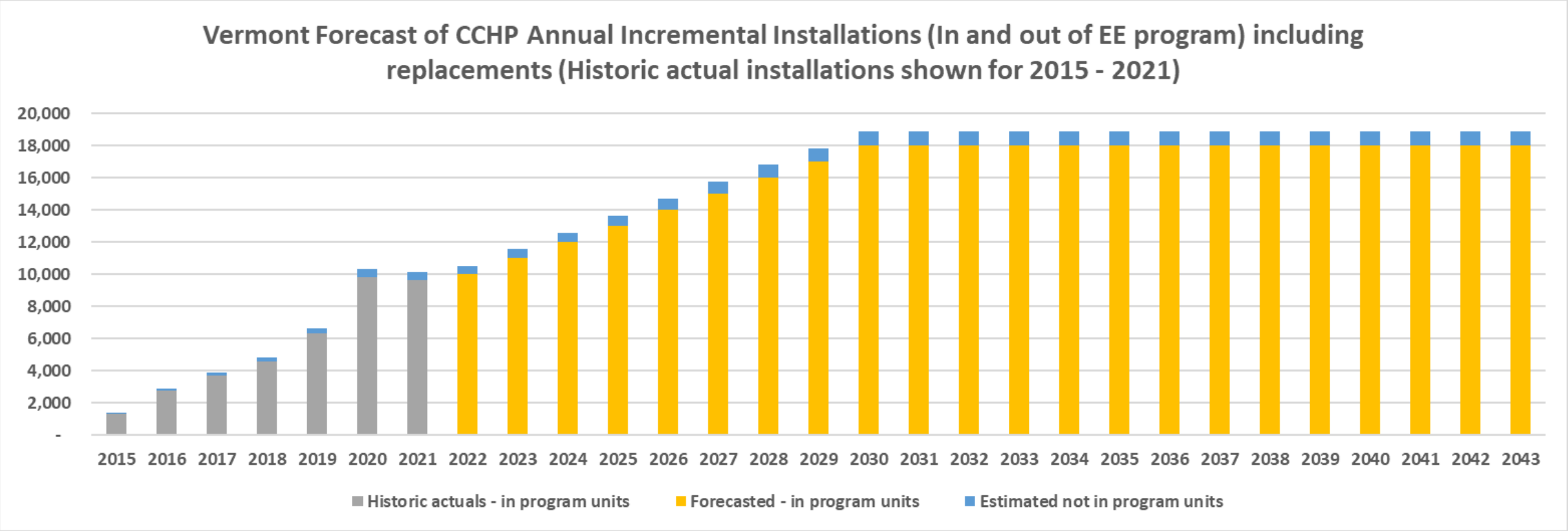
Residential and Commercial Building Energy Codes

TABLE 2-5 PROPOSED VERMONT CODE UPDATE SCHEDULE

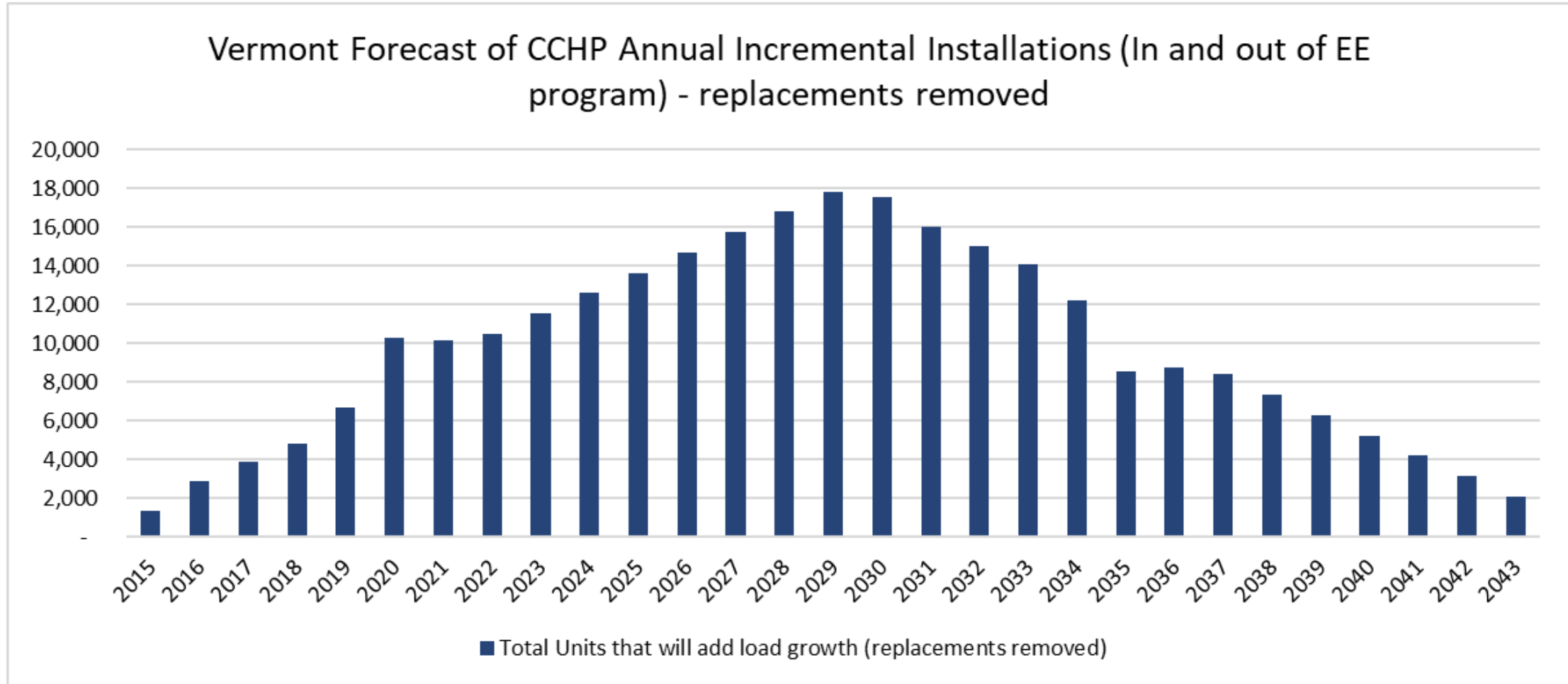
International Energy Code	VT Residential Building Energy Standard	VT Commercial Building Energy Standard	Effective Date in VT	Impact on Savings in Model (RBES/CBES)
2018 IECC	2019 RBES	2019 CBES	1/1/2020	-10% / -20%
2021 IECC	202 32 RBES	202 32 CBES	1/1/2023	-7% / -7%
2024 IECC	2025 RBES	2025 CBES	1/1/2026	-7% / -7%
2027 IECC	2028 RBES	2028 CBES	1/1/2029	-7% / -7%
<u>Net Zero Ready by 2030 Code</u>				
2030 IECC	2031 RBES	2031 CBES	1/1/2032	- <u>0-17%</u> / - <u>0-17%</u>
2033 IECC	2034 RBES	2034 CBES	1/1/2035	- <u>0-17%</u> / - <u>0-17%</u>
2036 IECC	2037 RBES	2037 CBES	1/1/2038	- <u>0-17%</u> / - <u>0-17%</u>
2039 IECC	2040 RBES	2040 CBES	1/1/2041	- <u>0-17%</u> / - <u>0-17%</u>

Source: 2022 Potential Study, PSD Assumptions Doc.1, May 9, 2022

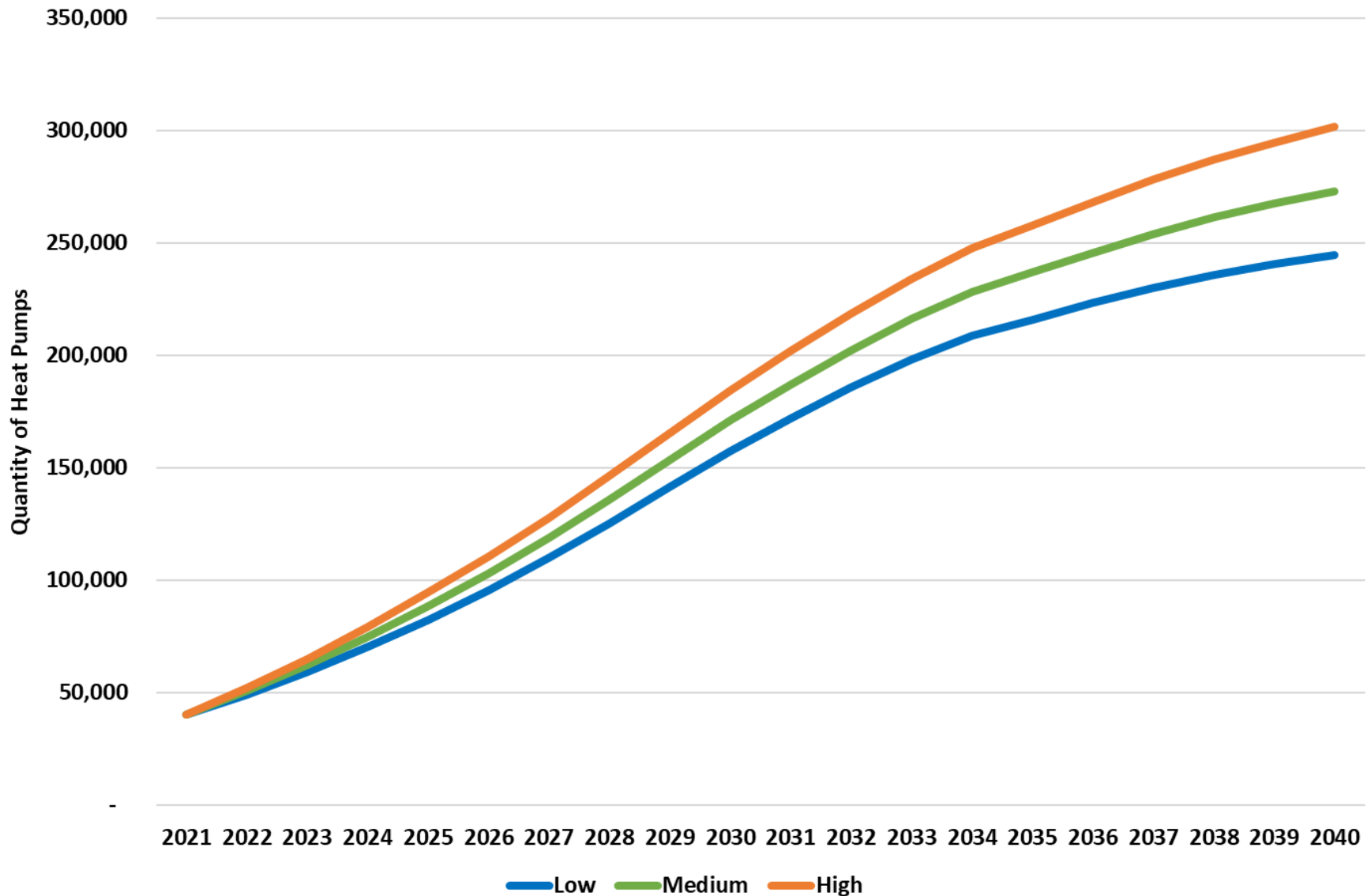
Cold Climate Heat Pump Forecast



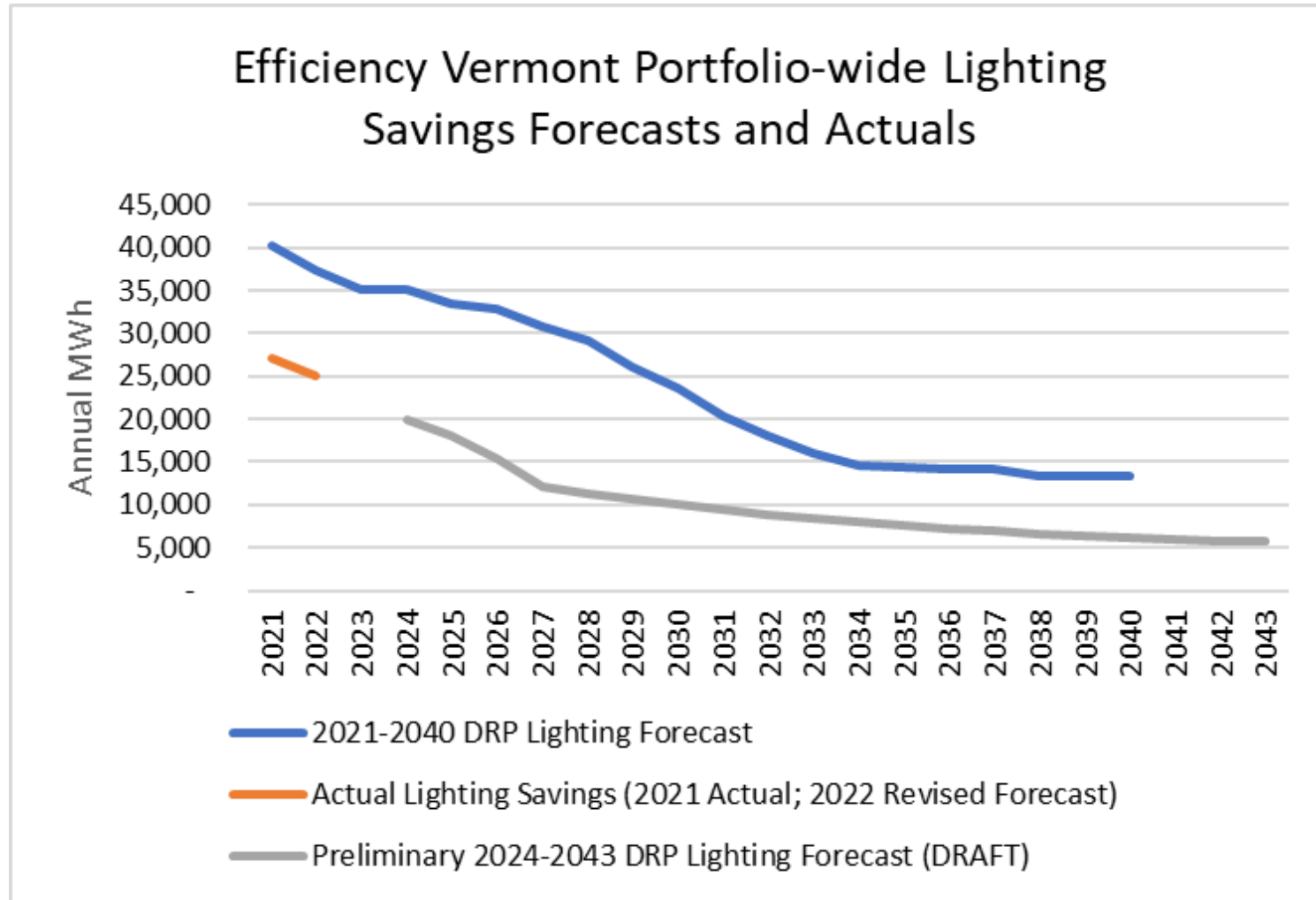
CCHP units estimated to add load growth



Cumulative Statewide Quantity of New Heat Pumps Estimated to Add Electric Load in Vermont for Various Market Adoption Scenarios



Lighting: Last DRP forecast compared to current market conditions



Drivers of lower lighting savings:

- COVID disruptions
- Supply chain challenges
- EISA (45 lumen/watt) backstop provision in effect this year
- H500 Mercury Ban – no 4' fluorescent sales in VT after 1/1/24

DRP focus (now through Dec)

- Review PSD Potential Study
- Continue gathering stakeholder input/feedback on DRP priorities, assumptions, and draft modeling results
- Continue developing and refining DRP proposal and EEC/TEPF models based on feedback
- Finalize DRP proposal for filing with PUC on 12/9/22

Thank you!

Questions?

Input/Feedback?



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