

Update to the Massachusetts Energy Efficiency Advisory Council (EEAC) on the Cape Light Compact's Proposed Cape & Vineyard Electrification Offering

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Working Together Toward A Smarter Energy Future

CVEO 3.0: Why and What's Changed?



- Low and moderate-income customers tend to have higher energy burdens and continue to be left behind in terms of:
 - Solar
 - Generally cannot take advantage of tax credits
 - High upfront cost to purchase
 - Less than 5% of residential systems participating in the SMART program are for low-income customers
 - Electrification
 - High upfront cost to convert to heat pumps and ongoing operating costs when not paired with solar PV
 - Battery storage
 - Low and moderate-income customers cannot afford the up-front costs associated with storage. Statewide pay-for-performance (PFP) program will not drive storage adoption in this customer group

CVEO 3.0: Why and What's Changed?



- Summer of 2022 – MA Climate Act signed into law. New model for CVEO
 - Municipal aggregators and electric distribution companies may propose limited offerings for solar PV and energy storage together with electrification where the solar PV is designed as a “qualifying facility.”
 - Proposals due by July 1, 2023
 - DPU must evaluate and report back to legislature by August 1, 2026
- One-time opportunity to learn what works and what doesn't and help shape future Energy Efficiency Plans
 - Climate Bill clarifies energy efficiency programs may combine efficiency-electrification-renewable generation-storage

Input from Department of Public Utilities



- Compact attended a Tech Session with the DPU in September to discuss filing a revised CVEO proposal complying with recent legislation
- Input from DPU included:
 - Start with HEA to ensure HP and solar PV are sized correctly
 - PV must be paired with electrification of home and sized to meet load. Goal is to get home as close to net zero as possible
 - Consider limiting number of customers receiving battery given high cost and impact on program budget
 - Explore the option of using sunlight backup as opposed to battery storage for resiliency
 - Focus on limiting bill impacts (will be a focus of the DPU)
 - Don't plan for IRA funding/tax credits because programs are not yet developed

Proposed Cape & Vineyard Electrification Offering



- Objectives
 - **100** total non-gas heated participants, tiered services by deed restricted status of home and income level:
 - **100% incentives for all three measures for customers 80% and below SMI living in deed restricted single family homes**
 - **Enhanced incentives for heat pumps and solar PV for customers between 61%-80% and below SMI living in non-deed restricted single family homes**
 - Convert oil, propane, electric resistance heat to cold climate heat pumps
 - Install PV systems to support electrification of heating system and reduce GHG emissions
 - Install a limited number of battery storage systems to evaluate resiliency and demand response benefits

CVEO Participant Incentives



	Income Level (SMI)		Customers			HP Incentive	Solar PV Incentive	Storage Incentive
			2023	2024	Total			
Deed Restricted	Low-Income	below 60%	15	35	50	100% (Statewide)	100%	100%
	Affordable	61-80%	9	21	30	100%	100%	100%
Non-Deed Restricted	Moderate-Income	61-80%	6	14	20	80% (max customer copay of \$5,000, financed w/ Heat Loan)	\$15,000 incentive. Finance balance w/ Heat Loan	Finance w/ Heat Loan
Total Participants			30	70	<u>100</u>			

Notes: Only 25% of customers will have batteries. Non-deed restricted customers will likely only have one battery due to the Heat Loan lending cap.

These numbers are likely to change as the Compact continues to develop the program, receives further feedback from Eversource (regarding interconnection) and the DPU, and implements the program.

Proposed CVEO Budget



Updated CVEO	Heat Pumps	Solar PV	Storage	Total*
2023	\$560k	\$890k	\$250k	\$1.7M
2024	\$1.34M	\$2.27M	\$580k	\$4.2M
2023-2024	\$1.9M	\$3.16M	\$830k	\$5.9M

*Budget subject to final QC and program modifications.

2.0 to 3.0: Summary of Changes



- Narrower customer target, more variation in technology adoption between customers, lower cost, reduced bill impacts
- Customer will own all technologies – no third-party ownership
- Solar PV will not participate in SMART program and will not net meter (per legislation)
- Utilizing planned income eligible budget
- Battery storage:
 - Customers not required to have batteries
 - Reduced the number of customers who will receive a battery
 - Reevaluated the number of batteries per customer
 - Changes due to high cost, limited resiliency with heat pumps
- Incentive levels:
 - Increased incentive for customers between 61-80% who live in deed restricted homes
 - Reduced incentive for customers between 61-80% who live in non-deed restricted homes (asking customers to use the Heat Loan to finance)

2.0 v 3.0 Key Data



Data	Units	Residential	Income Eligible	Total
CVEO 2.0				
Participants	Accounts	100	150	250
CLC Budget	\$M	4.20	7.15	11.35
TRC Benefits	\$M	16.55	25.82	42.37
Lifetime Savings	MMBtu	170,786	248,322	419,107
2030 GHGs	metric tons	406	611	1,016
CVEO 3.0				
Participants	Accounts	50	50	100
CLC Budget	\$M	2.83	3.10	5.93
TRC Benefits	\$M	5.99	6.58	12.57
Lifetime Savings	MMBtu	85,611	89,681	175,293
2030 GHGs	metric tons	221	224	444
Difference				
Participants	Accounts	(50)	(100)	(150)
CLC Budget	\$M	(1.37)	(4.04)	(5.42)
TRC Benefits	\$M	(10.55)	(19.24)	(29.80)
Lifetime Savings	MMBtu	(85,174)	(158,640)	(243,815)
2030 GHGs	metric tons	(185)	(387)	(572)

2.0 v 3.0 Bill Impacts



Rate Class	Year 1 of CVEO		Year 2 of CVEO	
	\$	%	\$	%
CVEO 2.0				
Residential (R-1)	\$ 2.12	1.5%	\$ 1.34	0.9%
Low-Income (R-2)	\$ 0.52	0.7%	\$ 0.35	0.5%
CVEO 3.0				
Residential (R-1)	\$ 0.60	0.3%	\$ 1.49	0.8%
Low-Income (R-2)	\$ 0.12	0.1%	\$ 0.29	0.3%
Difference				
Residential (R-1)	\$ (1.52)	-1.2%	\$ 0.15	-0.1%
Low-Income (R-2)	\$ (0.40)	-0.6%	\$ (0.06)	-0.2%
% Change				
Residential (R-1)	-72%	-77%	11%	-9%
Low-Income (R-2)	-77%	-83%	-18%	-41%

Bill Impacts to Non-participants



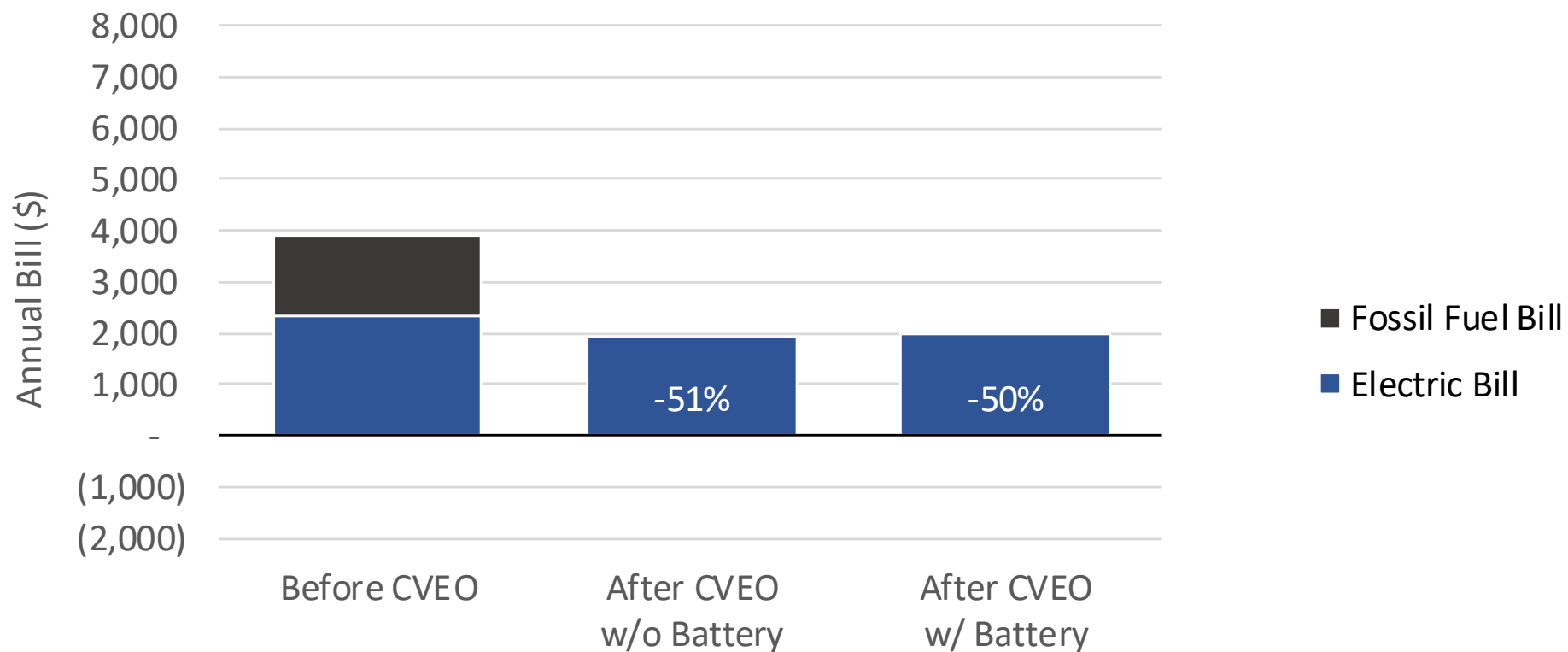
Rate	Monthly Avg kWh	2023		2024	
		Increase in Monthly Bill	Increase as % of Total Bill	Increase in Monthly Bill	Increase as % of Total Bill
Bill impact based on the incremental increase in the Residential budget due to the proposed offering					
Rate R-1 Residential	516	0.41	0.23%	1.02	0.56%
Rate R-2 Residential Assistance	488	0.00	0.00%	0.00	0.00%
Rate R-3 Residential Space Heating	740	0.58	0.24%	1.46	0.59%
Rate R-4 Residential Assistance Space Heating	874	0.00	0.00%	0.00	0.00%
Bill impact based on the incremental increase in the Residential and Income Eligible budget due to the proposed offering					
Rate R-1 Residential	516	0.60	0.34%	1.49	0.82%
Rate R-2 Residential Assistance	488	0.12	0.12%	0.29	0.30%
Rate R-3 Residential Space Heating	740	0.87	0.36%	2.14	0.87%
Rate R-4 Residential Assistance Space Heating	874	0.21	0.13%	0.51	0.32%

Impact to R-2 and R-4 customers only if CVEO budget is incremental to current income eligible program budget. The Compact expects the \$3.1M income eligible portion of the CVEO budget will come from the current income eligible program budget, in which case income eligible customers would not experience a bill impact specific to the CVEO budget.

Bill Impact to Participants



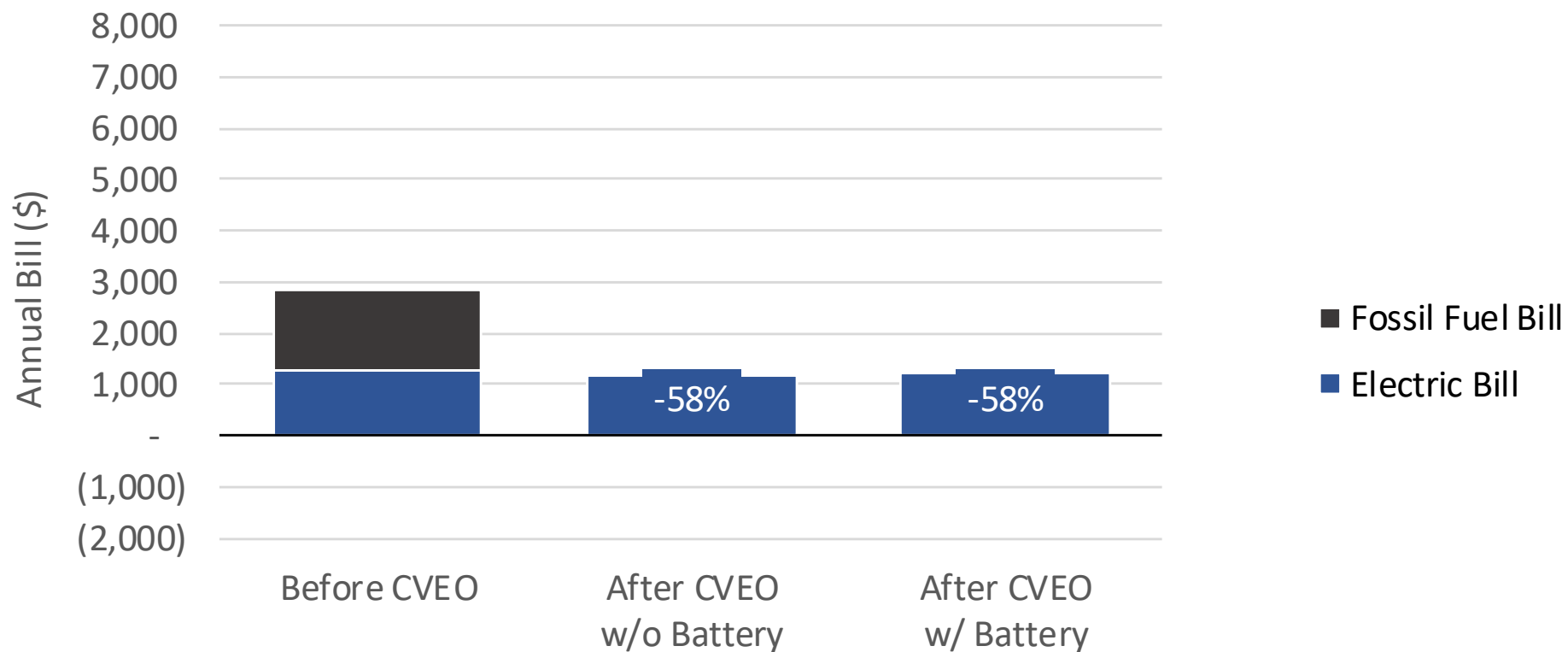
Affordable Customer Using Oil Heat Before CVEO



Bill Impact to Participants



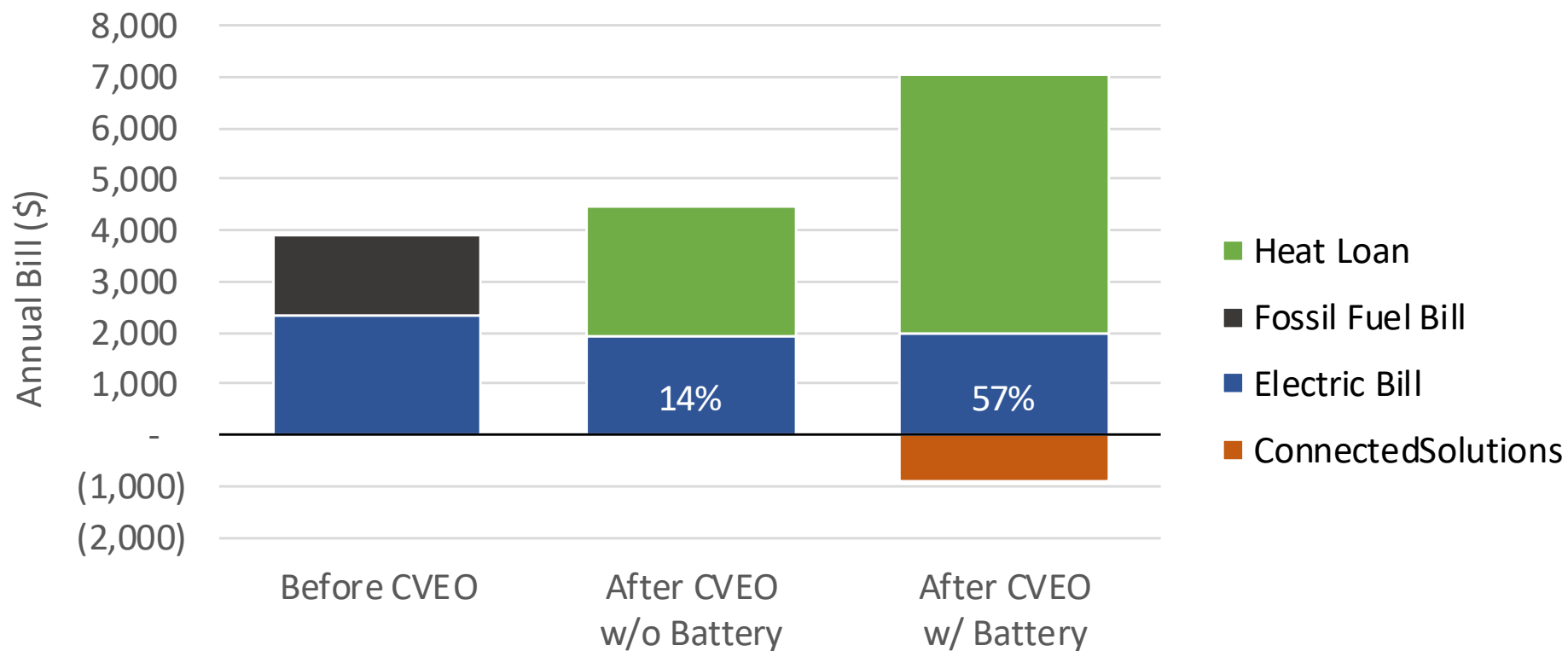
Income Eligible Customer Using Oil Heat Before CVEO



Bill Impact to Participants



Moderate Income Customer Using Oil Heat Before CVEO



MA DPU 22-137



- Compact Board voted in support of revised CVEO
- CVEO filed with DPU on October 27, 2022
- Petitions to Intervene due November 17, 2022
- Public Hearing Scheduled for December 14th at 2:00 pm
- Written comments on CVEO due December 14, 2022
- Briefs due on December 16, 2022
- Reply briefs due on December 23, 2022