APRIL 28, 2023



## Final 2023 Energy Efficiency Forecast

## INTRODUCTION



## Acronyms

- ARA 3 Third Annual Reconfiguration Auction (FCM)
- BCR Benefit-Cost Ratio
- CSO Capacity Supply Obligation (FCM)
- C&I Commercial and Industrial
- CELT 10-year forecast of Capacity, Energy, Loads and Transmission
- EE Energy Efficiency
- EEFWG Energy Efficiency Forecast Working
  Group
- FCA Forward Capacity Auction

- FCM Forward Capacity Market
- ICR Installed Capacity Requirement
- PA Program Administrator

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- PDR Passive Demand Resources
- R&L Residential and Low Income
- RGGI Regional Greenhouse Gas Initiative
- SBC System Benefit Charge

## Introduction

- This presentation contains the final Energy Efficiency (EE) forecast for the period 2023 through 2032
- The forecast estimates reductions in energy and demand from state-sponsored EE programs in the New England control area by state (CT, MA, ME, NH, RI, VT)
- The data used to create the forecast originates from state-sponsored EE program administrators (PAs) and state regulatory agencies
- The EE forecast is updated annually and is incorporated into ISO New England's Forecast Report of Capacity, Energy, Loads, and Transmission (the CELT Report)

# Introduction

#### Impacts

- The EE forecast is used in ISO studies including:
  - Long-term transmission planning studies
  - Economic planning studies
- The EE forecast is also used in the development of the net load forecast
- The EE forecast will not impact:
  - Installed Capacity Requirement (ICR)/Local Sourcing Requirement/Maximum Capacity Limit/Demand Curves
  - Forward Capacity Auctions (FCA)
  - Forward Capacity Market (FCM) related reliability studies (qualification, de-list bid reliability reviews)

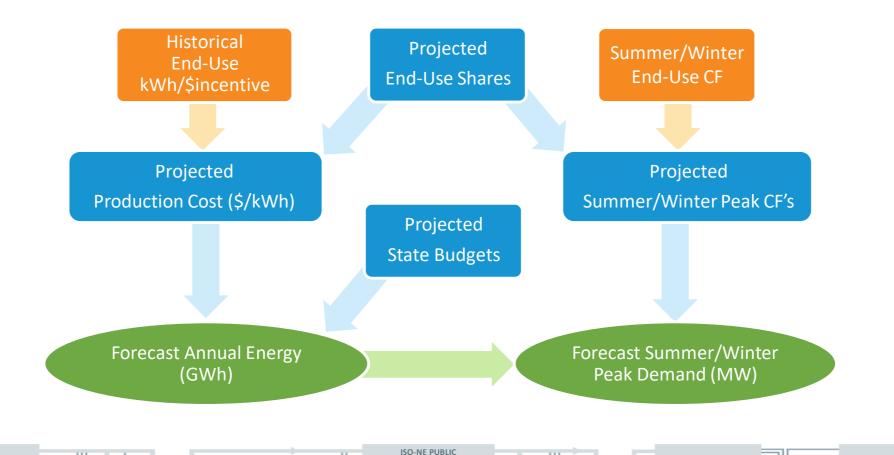
### **MODEL METHODOLOGY**



# **EE Forecast Methodology**

#### Process Diagram

- The process below is followed separately for each sector using sector specific inputs in each of the orange blocks
  - Sectors include Residential and Low Income (R&L) and Commerciale and Industrial (C&I)
- Summer and winter peak savings are computed separately using season-specific coincidence factors



## **INPUT DATA AND ASSUMPTIONS**

State End-Use Shares, Regional Coincidence Factors, and State Budgets



## **EE Forecast Input Data**

- Historical end-use kWh/\$incentive
  - source: PA provided data (2019-2021)
- Historical incentives as a % of total program costs
   source: PA provided data (2019-2021)
  - Source: PA provided data (2019-20
- Projected end-use shares
  - Source: PA provided data
- Summer and winter end-use coincidence factors
  - Source: PA provided BCR models
- Annual inflation adjustment of 2.8%
  - Source: Moody's Economics
- Annual graduated escalation of costs of 1.25%
  - Source: Original graduated rate introduced during the 2017 EE forecast

# **End-Use Share Projections**

- End-use shares by state and sector were compiled based on data provided by the PAs within each state
  - End-use shares shown on the following slides are based on energy
- Reporting of shares and end-uses varied within and across states
  - Projection timelines varied from a couple of years to the entire forecast horizon
  - Within a given state, some PAs may have had different shares for the same end-uses
- Where shares differed, shares from PAs within a state were averaged
- When only one PA provided a 10 year projection, that projection guided the shares
- In order to standardize end-uses across all states and PA's, the following aggregations were applied:
  - Residential "process" includes process, custom, food service, motors/drives, pool pumps, and appliances
  - Residential "HVAC" includes HVAC and building envelope
  - C&I "process" includes process and food service

## **Residential & Low Income End-Use Shares**

MA, CT, and RI

	Massachusetts												
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
HVAC	66%	68%	69%	69%	69%	69%	69%	69%	69%	69%			
Process	26%	24%	24%	24%	24%	24%	24%	24%	24%	24%			
Hot Water	6%	7%	7%	7%	7%	7%	7%	7%	7%	7%			
Lighting	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%			
Refrigeration	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%			
Connecticut													
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
HVAC	23%	50%	65%	65%	65%	65%	65%	65%	65%	65%			
Process	44%	17%	17%	17%	17%	17%	17%	17%	17%	17%			
Hot Water	8%	11%	11%	11%	11%	11%	11%	11%	11%	11%			
Lighting	18%	15%	0%	0%	0%	0%	0%	0%	0%	0%			
Refrigeration	8%	7%	7%	7%	7%	7%	7%	7%	7%	7%			
				Rhode	e Island								
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
HVAC	43%	49%	49%	49%	49%	49%	49%	49%	49%	49%			
Process	27%	31%	31%	31%	31%	31%	31%	31%	31%	31%			
Hot Water	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%			
Lighting	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Refrigeration	15%	17%	17%	17%	17%	17%	17%	17%	17%	17%			

## **Residential & Low Income End-Use Shares**

#### VT, NH, and ME

				Ver	mont							
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
HVAC	29%	40%	43%	46%	47%	48%	50%	50%	52%	53%		
Process	20%	25%	25%	25%	25%	25%	25%	27%	26%	26%		
Hot Water	16%	4%	4%	4%	4%	4%	4%	4%	4%	4%		
Lighting	34%	29%	26%	24%	23%	21%	19%	17%	15%	14%		
Refrigeration	1%	2%	2%	2%	2%	2%	2%	3%	3%	3%		
New Hampshire												
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
HVAC	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%		
Process	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%		
Hot Water	21%	22%	22%	22%	22%	22%	22%	22%	22%	22%		
Lighting	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Refrigeration	10%	11%	11%	11%	11%	11%	11%	11%	11%	11%		
				Ma	aine							
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
HVAC	1%	2%	2%	3%	3%	3%	3%	3%	3%	3%		
Process	4%	7%	9%	11%	11%	11%	11%	11%	11%	11%		
Hot Water	33%	51%	69%	86%	86%	86%	86%	86%	86%	86%		
Lighting	62%	41%	21%	0%	0%	0%	0%	0%	0%	0%		

## **Commercial & Industrial End-Use Shares**

MA, CT, and RI

				Massa	chusetts							
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
Compressed Air	2%	2%	3%	4%	4%	4%	4%	4%	4%	4%		
Custom Measures	11%	12%	19%	22%	23%	24%	24%	24%	24%	24%		
Hot Water	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%		
HVAC	17%	20%	28%	33%	35%	37%	37%	37%	37%	37%		
Lighting	54%	47%	23%	11%	6%	0%	0%	0%	0%	0%		
Motors/Drives	5%	5%	7%	8%	9%	9%	9%	9%	9%	9%		
Process	6%	7%	10%	12%	13%	13%	13%	13%	13%	13%		
Refrigeration	6%	6%	9%	10%	11%	12%	12%	12%	12%	12%		
Connecticut												
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
HVAC	9%	9%	19%	27%	35%	35%	35%	35%	35%	35%		
Lighting	64%	63%	46%	37%	31%	31%	31%	31%	31%	31%		
Motors/Drives	2%	2%	4%	4%	5%	5%	5%	5%	5%	5%		
Process	23%	23%	26%	26%	28%	28%	28%	28%	28%	28%		
Refrigeration	2%	2%	6%	6%	1%	1%	1%	1%	1%	1%		
				Rhod	e Island							
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
Compressed Air	7%	11%	25%	25%	25%	25%	25%	25%	25%	25%		
Hot Water	<1%	<1%	1%	1%	1%	1%	1%	1%	1%	1%		
Process	6%	9%	20%	20%	20%	20%	20%	20%	20%	20%		
HVAC	10%	16%	35%	35%	35%	35%	35%	35%	35%	35%		
Lighting	72%	56%	0%	0%	0%	0%	0%	0%	0%	0%		
Motors/Drives	3%	5%	10%	10%	10%	10%	10%	10%	10%	10%		
Refrigeration	3%	4%	9%	9%	9%	9%	9%	9%	9%	9%		

## **Commercial & Industrial End-Use Shares**

VT, NH, and ME

				Ver	mont							
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
Hot Water	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		
HVAC	14%	14%	14%	14%	15%	15%	16%	16%	17%	17%		
Lighting	50%	49%	48%	48%	45%	44%	41%	38%	34%	31%		
Motors/Drives	8%	8%	8%	8%	9%	9%	9%	9%	10%	10%		
Process	14%	15%	15%	15%	16%	17%	17%	20%	22%	24%		
Refrigeration	14%	15%	15%	15%	15%	15%	16%	16%	17%	17%		
New Hampshire												
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
<b>Custom Measures</b>	5%	6%	7%	9%	14%	17%	19%	19%	19%	19%		
HVAC	6%	7%	9%	11%	17%	21%	23%	23%	23%	23%		
Lighting	78%	71%	65%	59%	34%	18%	9%	9%	9%	9%		
Process	4%	6%	7%	8%	13%	16%	18%	18%	18%	18%		
Compressed Air	5%	6%	7%	9%	14%	17%	19%	19%	19%	19%		
Motors/Drives	1%	1%	1%	2%	3%	3%	4%	4%	4%	4%		
Refrigeration	2%	2%	3%	3%	5%	6%	7%	7%	7%	7%		
				Ma	aine							
End-Use	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
Compressed Air	8%	12%	16%	20%	24%	24%	24%	24%	24%	24%		
<b>Custom Measures</b>	3%	4%	6%	7%	9%	9%	9%	9%	9%	9%		
HVAC	30%	37%	43%	49%	56%	56%	56%	56%	56%	56%		
Lighting	58%	47%	35%	24%	12%	12%	12%	12%	12%	12%		

# **End-Use Starting kWh/\$Incentive**

Source: PA Supplied Data (2019-2021)

Reside	ential & Low Income
End-Use	kWh/\$Incentive
HVAC	0.31
Water Heating	1.72
Lighting	3.33
Refrigeration	1.51
Process	2.33

Comm	nercial & Industrial
End-Use	kWh/\$Incentive
HVAC	1.97
Water Heating	0.56
Lighting	2.94
Refrigeration	2.24
Process	2.50
Compressed Air	3.54
Motors/Drives	2.83
Custom	4.12

## **End-Use Coincidence Factors**

Source: PA Supplied BCR Models (Current State Plans)

	Residential & Low Income										
End-Use	Summer Coincidence Factor (MW/GWh)	Winter Coincidence Factor (MW/GWh)									
HVAC	0.559	0.464									
Water Heating	0.128	0.173									
Lighting	0.152	0.208									
Refrigeration	0.135	0.286									
Process	0.146	0.217									

	Commercial & Industrial											
End-Use	Summer Coincidence Factor (MW/GWh)	Winter Coincidence Factor (MW/GWh)										
HVAC	0.504	0.338										
Water Heating	0.103	0.120										
Lighting	0.154	0.166										
Refrigeration	0.100	0.098										
Process	0.114	0.103										
Compressed Air	0.217	0.179										
Motors/Drives	0.193	0.217										
Custom	0.156	0.182										

## State EE Budgets

#### Source: State EE Budget Administrators

	Total R&L Budget Dollars (\$1000's)								Total C&I Budget Dollars (\$1000's)						
	NE	MA	СТ	ME	RI	VT	NH		NE	MA	СТ	ME	RI	VT	NH
2023	561,616	367,466	65,483	14,251	69,675	20,262	24,479	2023	458,593	259,733	106,978	9,782	21,253	24,589	36,258
2024	614,279	409,895	74,464	13,801	69,675	21,965	24,479	2024	461,043	263,874	102,522	9,758	21,253	27,378	36,258
2025	620,276	409,895	79,186	14,059	69,675	22,982	24,479	2025	472,661	263,874	113,103	9,519	21,253	28,654	36,258
2026	619,474	409,895	78,273	14,059	69,675	23,093	24,479	2026	472,985	263,874	113,174	9,519	21,253	28,907	36,258
2027	618,252	409,895	76,889	14,059	69,675	23,255	24,479	2027	473,560	263,874	113,433	9,519	21,253	29,223	36,258
2028	618,489	409,895	76,674	14,059	69,675	23,707	24,479	2028	472,627	263,874	111,860	9,519	21,253	29,863	36,258
2029	617,705	409,895	75,414	14,059	69,675	24,183	24,479	2029	472,543	263,874	111,240	9,519	21,253	30,399	36,258
2030	618,037	409,895	75,414	14,059	69,675	24,515	24,479	2030	470,429	263,874	108,755	9,519	21,253	30,770	36,258
2031	618,712	409,895	75,418	14,059	69,675	25,186	24,479	2031	468,242	263,874	105,808	9,519	21,253	31,530	36,258
2032	619,769	409,895	75,418	14,059	69,675	26,243	24,479	2032	469,434	263,874	105,808	9,519	21,253	32,722	36,258

		Τ	otal Budget I	Dollars (\$100	)0's)						
	NE MA CT ME RI VT NH										
2023	1,020,209	627,199	172,461	24,033	90,928	44,851	60,737				
2024	1,075,322	673,769	176,986	23,559	90,928	49,343	60,737				
2025	1,092,937	673,769	192,289	23,578	90,928	51,636	60,737				
2026	1,092,459	673,769	191,447	23,578	90,928	52,000	60,737				
2027	1,091,812	673,769	190,322	23,578	90,928	52,478	60,737				
2028	1,091,116	673,769	188,534	23,578	90,928	53,570	60,737				
2029	1,090,248	673,769	186,654	23,578	90,928	54,582	60,737				
2030	1,088,466	673,769	184,169	23,578	90,928	55,285	60,737				
2031	1,086,954	673,769	181,226	23,578	90,928	56,716	60,737				
2032	1,089,203	673,769	181,226	23,578	90,928	58,965	60,737				

## **State EE Production Costs**

*Source: End-use shares applied to end-use production costs* 

	R&	L Produc	tion Cos	sts (\$/M	Wh)			C&	l Produc	tion Cos	ts (\$/M\	Nh)	
	MA	СТ	ME	RI	VT	NH		MA	СТ	ME	RI	VT	NH
2023	3,125	1,500	595	2,305	1,704	3,028	2023	516	516	532	502	541	482
2024	3,454	2,727	725	2,744	2,252	3,223	2024	551	544	571	546	569	510
2025	3,724	3,600	878	2,924	2,548	3,434	2025	608	613	619	548	608	547
2026	4,015	3,881	1,059	3,152	1,867	3,702	2026	669	684	679	698	656	593
2027	4,378	4,232	1,155	3,437	3,189	4,037	2027	737	765	753	761	719	661
2028	4,829	4,668	1,274	3,791	3,582	4,453	2028	823	844	831	840	797	738
2029	5,387	5,207	1,421	4,229	4,110	4,967	2029	918	941	927	937	894	830
2030	6,077	5,873	1,603	4,770	4,681	5,603	2030	1,036	1,062	1,045	1,057	1,014	936
2031	6,930	6,698	1,828	5,440	5,509	6,390	2031	1,181	1,211	1,192	1,205	1,165	1,068
2032	7,991	7,723	2,108	6,272	6,457	7,367	2032	1,362	1,396	1,375	1,390	1,353	1,231

	Weighted Production Costs (\$/MWh)												
	MA	СТ	ME	RI	VT	NH							
2023	1,015	687	572	1,246	787	732							
2024	1,127	819	654	1,421	851	769							
2025	1,239	933	761	1,595	922	832							
2026	1,358	1,029	873	1,716	1,000	893							
2027	1,491	1,147	943	1,894	1,093	996							
2028	1,664	1,265	1,072	2,097	1,218	1,104							
2029	1,856	1,403	1,179	2,331	1,365	1,240							
2030	2,092	1,601	1,310	2,598	1,536	1,412							
2031	2,381	1,831	1,474	3,031	1,772	1,598							
2032	2,750	2,107	1,684	3,497	2,106	1,841							

## **ACCOUNTING FOR EMBEDDED EXPIRING MEASURES**



# **Accounting for Embedded Expiring Measures**

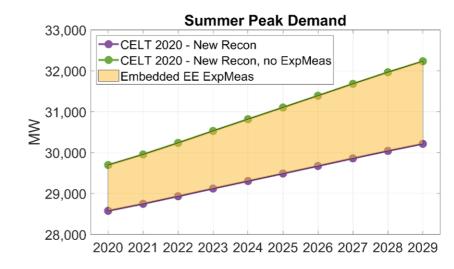
- Expiring measures become embedded as load reductions in the gross load forecast
- Accounting for EE measure expiration in the gross load forecast <u>reconstitution methodology</u> results in a gross load forecast with a lower slope (i.e., less gross load growth over time)
- The EE forecast works in tandem with the gross load forecast
- As a result, the EE forecast should be a projection of EE net of the cumulative impacts of expiring measures embedded in the gross load forecast
  - Impacts are appropriately captured in the reconstitution trend line that serves as the first four years of the EE forecast
  - Embedded expiring measures must be accounted for in the years beyond the most recent FCA's Capacity Commitment Period (CCP), years 5-10 of the EE forecast
  - An overview of how expiring measures embedded in the load forecast are accounted for in the EE forecast was provided at the <u>December 7, 2020 EEFWG</u> meeting
- The EE forecast is a projection of EE described as follows:
  - The trend line of market-facing EE reflected in the new reconstitution up through the most recent FCA's CCP
  - A forecast of market-facing EE that will further reduce load beyond the most recent FCA's CCP

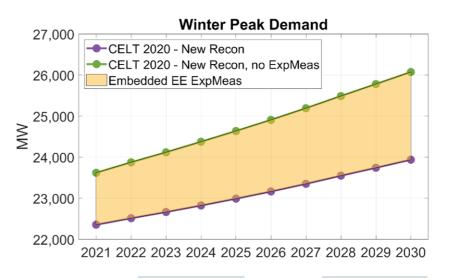
# **Accounting for Embedded Expiring Measures**

- To determine the amount of EE expiring measures embedded as load reductions in the gross load forecast
  - 1. Use the new reconstitution methodology to recreate the historical reconstitution that reflects no EE measure expiration
    - I.e., the most recent FCA CSOs plus all cumulative EE expiring measures up through the most recent FCA's CCP
  - 2. Use this reconstitution to develop a gross load forecast that reflects no EE measure expiration
  - 3. The differences between this version of the gross load forecast and the actual gross load forecast are the amount of expiring measures embedded over the forecast horizon

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• An example of the estimated embedded expiring measures is shown for CELT 2020 in the adjacent plots

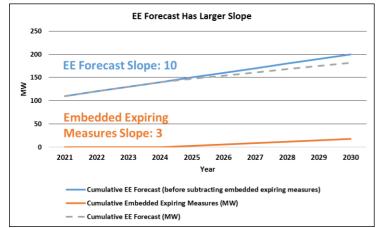




# **Accounting for Embedded Expiring Measures**

Examples Illustrating Possible Impacts Of Accounting

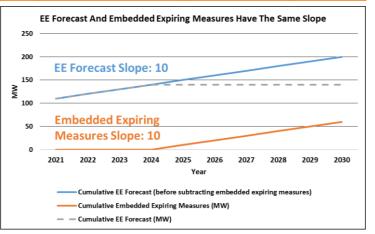
EE Forecast Grows Faster Than Embedded Expiring Measures										
Year	Cumulative EE Forecast (before subtracting embedded expiring measures) (MW)	Cumulative Embedded Expiring Measures (MW)	Cumulative EE Forecast (MW)							
2021	110	0	110							
2022	120	0	120							
2023	130	0	130							
2024	140	0	140							
2025	150	3	147							
2026	160	6	154							
2027	170	9	161							
2028	180	12	168							
2029	190	15	175							
2030	200	18	182							



EE forecast grows faster than embedded expiring measures, resulting in an EE forecast that *increases* 

EE Forecast and Embedded Expiring Measures Grow at the Same Rate									
Year	Cumulative EE Forecast (before subtracting embedded expiring measures) (MW)	Cumulative Embedded Expiring Measures (MW)	Cumulative EE Forecast (MW)						
2021	110	0	110						
2022	120	0	120						
2023	130	0	130						
2024	140	0	140						
2025	150	10	140						
2026	160	20	140						
2027	170	30	140						
2028	180	40	140						
2029	190	50	140						
2030	200	60	140						

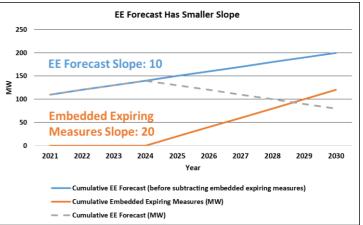
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EE forecast grows at the same rate as the embedded expiring measures, resulting in an EE forecast that is *flat* 

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EE Forecast Grows Slower Than Embedded Expiring Measures										
Year	Cumulative EE Forecast (before subtracting embedded expiring measures) (MW)	Cumulative Embedded Expiring Measures (MW)	Cumulative EE Forecast (MW)							
2021	110	0	110							
2022	120	0	120							
2023	130	0	130							
2024	140	0	140							
2025	150	20	130							
2026	160	40	120							
2027	170	60	110							
2028	180	80	100							
2029	190	100	90							
2030	200	120	80							



EE forecast grows slower than embedded expiring measures, resulting in an EE forecast that <u>decreases</u>

## FINAL 2023 EE FORECAST

Annual Energy, Summer Peak, and Winter Peak Savings



### 2023 EE Forecast (Before Removal of Embedded Expiring Measures)

Incremental Annual Energy, Summer Peak, and Winter Peak Savings

	Annu	al Energy	y Savings	GWh)			
	NE	СТ	MA	ME	NH	RI	VT
2023	697	185	328	51	44	55	34
2024	697	185	328	51	44	55	34
2025	697	185	328	51	44	55	34
2026	697	185	328	51	44	55	34
2027	800	166	452	25	61	48	48
2028	719	149	405	22	55	44	44
2029	644	133	363	20	49	39	40
2030	569	115	322	18	43	35	36
2031	498	99	283	16	38	30	32
2032	432	86	245	14	33	26	28
Total (2023-2032)	6,450	1,488	3,382	319	455	442	364

Summ	Summer Peak Demand Savings (MW)							Winter Peak Demand Savings (MW)								
	NE	СТ	MA	ME	NH	RI	VT			NE	СТ	MA	ME	NH	RI	VT
2023	116	33	54	8	7	9	5		2023	105	26	51	8	7	8	5
2024	116	33	54	8	7	9	5		2024	105	26	51	8	7	8	5
2025	116	33	54	8	7	9	5		2025	105	26	51	8	7	8	5
2026	116	33	54	8	7	9	5		2026	105	26	51	8	7	8	5
2027	229	47	137	6	14	15	10		2027	194	38	114	6	13	13	10
2028	211	42	126	6	13	14	10		2028	176	34	104	5	12	12	9
2029	189	38	113	5	12	12	9		2029	157	30	93	5	10	11	8
2030	168	33	100	5	11	11	8		2030	137	26	82	4	9	9	7
2031	145	28	87	4	10	9	7		2031	121	23	72	4	8	8	6
2032	125	24	76	3	8	8	6		2032	106	20	63	3	7	7	6
Total (2023-2032)	1,531	344	855	61	96	105	70		Total (2023-2032)	1,311	275	732	59	87	92	66

## Final 2023 EE Forecast (Net of embedded Expiring Measures)

Incremental Annual Energy, Summer Peak, and Winter Peak Savings

	Annua	al Energy	y Savings	s (GWh)			
	NE	СТ	MA	ME	NH	RI	VT
2023	697	185	328	51	44	55	34
2024	697	185	328	51	44	55	34
2025	697	185	328	51	44	55	34
2026	697	185	328	51	44	55	34
2027	141	60	80	-31	34	-15	13
2028	61	43	34	-34	28	-19	9
2029	-158	11	-93	-50	14	-39	-1
2030	-235	-7	-134	-53	9	-44	-6
2031	-306	-23	-173	-55	3	-48	-10
2032	-371	-36	-211	-57	-2	-52	-13
Total (2023-2032)	1,920	788	815	-76	262	3	128

Summ	Summer Peak Demand Savings (MW)							Winter Peak Demand Savings (MW)								
	NE	СТ	MA	ME	NH	RI	VT			NE	СТ	MA	ME	NH	RI	VT
2023	116	33	54	8	7	9	5		2023	105	26	51	8	7	8	5
2024	116	33	54	8	7	9	5		2024	105	26	51	8	7	8	5
2025	116	33	54	8	7	9	5		2025	105	26	51	8	7	8	5
2026	116	33	54	8	7	9	5		2026	105	26	51	8	7	8	5
2027	72	16	49	-5	9	1	2		2027	118	38	67	-4	7	3	7
2028	53	11	38	-5	8	0	1		2028	101	34	57	-4	6	2	6
2029	30	6	25	-6	7	-2	0		2029	82	30	45	-5	5	1	6
2030	8	2	12	-7	5	-3	-1		2030	65	26	36	-5	4	-1	5
2031	-13	-3	0	-7	4	-5	-2		2031	46	23	25	-6	2	-2	4
2032	-32	-7	-12	-8	3	-6	-2		2032	31	20	16	-6	1	-3	3
Total (2023-2032)	582	157	328	-6	64	21	18		Total (2023-2032)	863	275	450	2	53	32	51

## **EE Forecast Comparison**

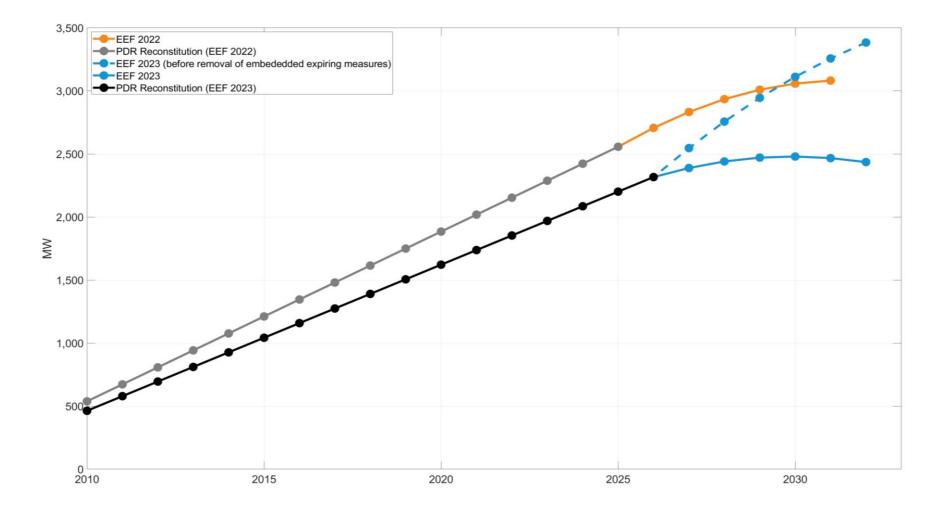
#### Final 2022 EE Forecast Vs. Final 2023 EE Forecast

Total EE Dollars (1000s)	NE	MA	СТ	ME	RI	VT	NH
2022 EE Forecast			-				
Total (2022-2031)	11,519,566	6,980,305	1,891,562	357,374	1,118,750	534,765	636,810
2023 EE Forecast							
Total (2023-2032)	10,818,726	6,691,120	1,845,314	236,216	909,280	529,426	607,370
Energy Savings (GWh)	NE	MA	СТ	ME	RI	VT	NH
2022 EE Forecast							
Total (2022-2031)	4,517	2,196	1,283	72	416	241	317
2023 EE Forecast							
Total (2023-2032)	1,920	815	788	-76	3	128	262
Summer Peak Savings (MW)	NE	MA	СТ	ME	RI	VT	NH
2022 EE Forecast							
Total (2022-2031)	1,061	631	220	17	81	33	82
2023 EE Forecast							
Total (2023-2032)	582	328	157	-6	21	18	64
Winter Peak Savings (MW)	NE	MA	СТ	ME	RI	VT	NH
2022 EE Forecast							
Total (2022-2031)	1,132	608	317	14	70	64	61
2023 EE Forecast							
Total (2023-2032)	863	450	275	2	32	51	53

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# Energy Efficiency on Summer Peak

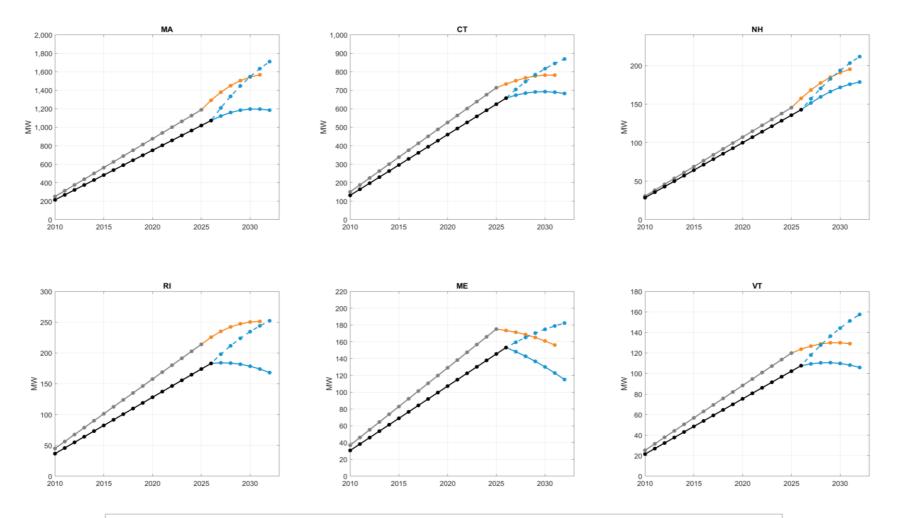
New England



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# Energy Efficiency on Summer Peak

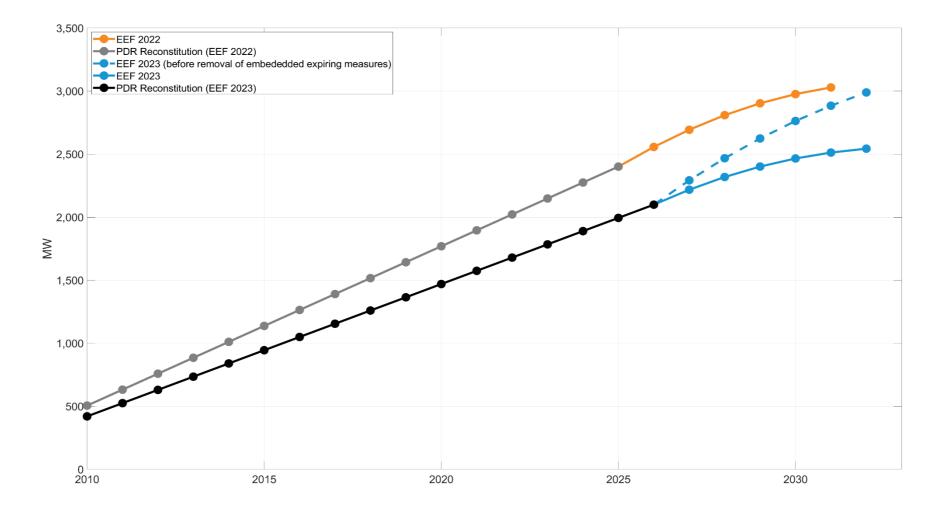
States



EEF 2022 — PDR Reconstitution (EEF 2022) - EEF 2023 (before removal of embededded expiring measures) — EEF 2023 — PDR Reconstitution (EEF 2023)

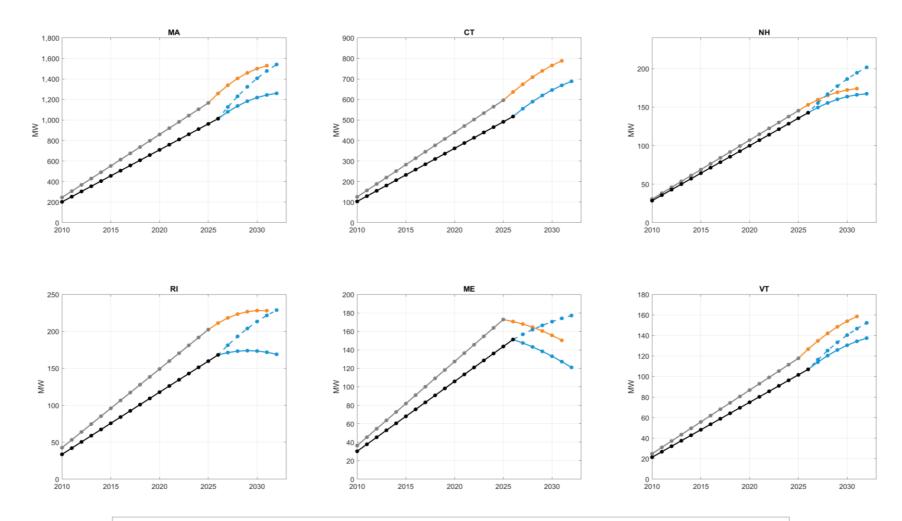
# Energy Efficiency on Winter Peak

New England



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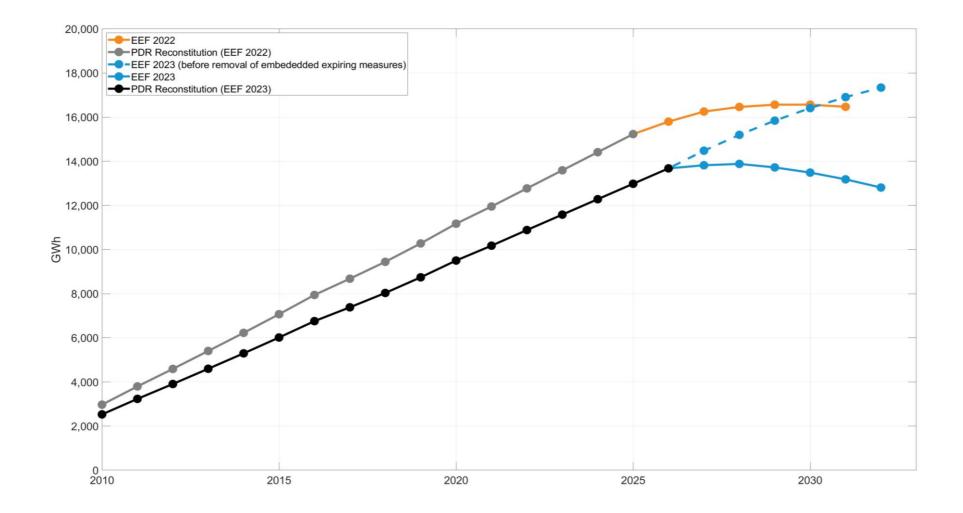
## **Energy Efficiency on Winter Peak** *States*



🔶 EEF 2022 — PDR Reconstitution (EEF 2022) - EEF 2023 (before removal of embededded expiring measures) - EEF 2023 — PDR Reconstitution (EEF 2023)

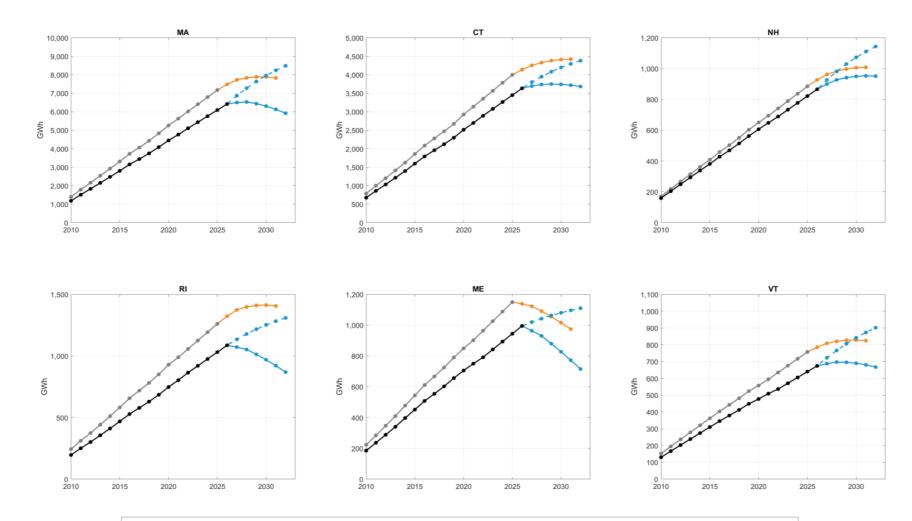
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## **Energy Efficiency on Annual Energy** *New England*



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## **Energy Efficiency on Annual Energy** *States*



🕶 EEF 2022 🛶 PDR Reconstitution (EEF 2022) - 🔹 EEF 2023 (before removal of embededded expiring measures) 🛶 EEF 2023 🛶 PDR Reconstitution (EEF 2023)