

2020 Q1 KEY PERFORMANCE INDICATORS (KPIs)

► May 20, 2020

KPI #1: RECOMMENDATION TO INSTALLATION CONVERSION RATES (RES)

- ▶ **Purpose: Assess success of PA efforts to secure customer conversions for select recommendations made during audit**
- ▶ **Q1 is first reporting period for which we have a full year of data**

Statewide, combined electric and gas

Measures	# of Recommendations	Total # of Conversions (Cumulative)	Conversion Rate
	2019 Q1	2019 Q1-2020 Q1	
Insulation	20,348	9,001	44%
Air Sealing	18,555	9,342	50%
Duct Sealing	2,172	856	39%
Duct Insulation	339	128	38%
TOTAL	41,414	19,327	47%

KPI #1: RECOMMENDATION TO INSTALLATION CONVERSION RATES (RES)

- ▶ Reporting by individual PAs helps identify PA differences and can prompt exchange of best practices

Conversion rates Q1 2019-Q1 2020

Measures	National Grid	Eversource	Unitil	Cape Light	Columbia Gas	Liberty	Berkshire
Insulation	43%	41%	43%	59%	49%	31%	51%
Air Sealing	53%	43%	44%	59%	50%	31%	50%
Duct Sealing	47%	31%	25%	56%	32%	24%	-
Duct Insulation	49%	26%	50%	55%	32%	16%	-

Why are Eversource's conversion rates so much lower than National Grid's?

What is Cape Light Compact doing that is working so well?

KPI #3: # OF HEATING SYSTEM RECOMMENDATIONS BY FUEL TYPE AT HEAS

- Purpose: Assess impacts of PAs' new Energy Optimization framework

Q1 Recommended Heating Systems Statewide (minus Eversource)

	Gas Furnace	Gas Boiler	Oil Furnace	Oil Boiler	Propane Furnace	Propane Boiler	Electric Res.	DMSHP	Central HP	Central AC	Total	HEA Count
Biomass	-	-	-	1	-	1	-	5	2	-	9	31
Electric resistance	24	22	2	1	3	5	-	368	38	9	472	932
Gas boiler	31	1,994	-	-	-	-	-	218	34	168	2,453	6,729
Gas furnace	1,311	22	-	-	-	-	-	58	66	399	1,858	4,791
Heat pump	6	1	-	2	-	-	-	20	41	5	75	245
Oil boiler	6	244	7	1,057	2	39	-	685	210	113	2,363	4,818
Oil furnace	63	3	382	2	12	1	-	93	179	78	813	1,437
Other	3	5	-	-	-	-	-	32	15	46	101	189
Propane boiler	1	6	-	1	1	55	-	31	11	7	113	255
Propane furnace	8	1	1	-	58	6	-	36	41	20	171	495
Grand Total	1,453	2,298	392	1,064	76	107	-	1,546	637	845	8,428	19,922

KPI #3: # OF HEATING SYSTEM RECOMMENDATIONS BY FUEL TYPE AT HEAS

- **Gas companies other than National Grid and Eversource* have not been making fuel switching recommendations to gas heating customers**

Existing Gas Boiler, Q1

System Recommended	Gas Boiler	Ductless Minisplit HP	Central HP	Central AC
National Grid	861	181	33	136
Eversource*				
Unitil	20	-	-	-
CMA	597	-	-	19
Berkshire	2	-	-	-
Liberty	91	-	-	3

Existing Gas Furnace, Q1

System Recommended	Gas Furnace	Ductless Minisplit HP	Central HP	Central AC
National Grid	568	39	47	285
Eversource*				
Unitil	7	-	-	-
CMA	411	-	-	-
Berkshire	1	-	-	-
Liberty	40	-	-	2

*Eversource data for KPI#3 have been omitted due to use of a tracking method that is inconsistent with the other PAs. The inconsistency was resolved in February and the data will be included in our analyses starting in Q2.

KPI #3: # OF HEATING SYSTEM RECOMMENDATIONS BY FUEL TYPE AT HEAS

- ▶ Appears Energy Specialist and HPC training in Energy Optimization in late 2019 hasn't yet boosted heat pump recommendation #s

Statewide results to date minus Eversource

	Ductless Minisplit Heat Pump				Central HP				HEA Count				
	2019 Q1/2	2019 Q3	2019 Q4	2020 Q1	2019 Q1/2	2019 Q3	2019 Q4	2020 Q1	2019 Q1/2	2019 Q3	2019 Q4	2020 Q1	
Existing heating system	Biomass	1	3	11	3	0	0	1	0	70	34	29	22
	Electric resistance	452	407	431	270	28	14	8	27	1830	1822	-94	697
	Gas boiler	560	326	202	182	41	22	29	33	15750	6833	6973	5695
	Gas furnace	105	63	43	40	38	40	37	47	10709	4818	4996	4036
	Heat pump	13	3	9	15	55	54	34	25	384	197	151	180
	Oil boiler	936	671	711	450	135	111	103	119	9384	4844	3910	3414
	Oil furnace	144	69	95	71	86	77	153	95	2658	1244	1178	977
	Other	0	10	5	14	0	3	3	2	169	134	111	123
	Propane boiler	47	25	36	24	3	19	9	5	496	259	201	170
	Propane furnace	45	-18	72	25	20	2	55	19	898	411	447	383
	Grand Total	2303	1559	1615	1094	406	342	432	372	42348	-1603	38154	15697

KPI #4: RATIO OF PROJECTS THAT INCLUDE LIGHTING CONTROLS (C&I)

► **Purpose:** Provide insight into lighting projects and with controls

► **Limitations**

- Data provided by some PAs changed from Q1 to Q2 to Q3 in 2019
- Data provided as cumulative year-to-date
- Unable to conduct trend analysis until data consistently reported quarter to quarter
- Does not include any data from the small business turnkey pathway



KPI #4: RATIO OF PROJECTS THAT INCLUDE LIGHTING CONTROLS (C&I)

► Data as of Q4 2019

Statewide			
C&I Program/Initiative	YTD Lighting Projects	YTD Projects with Controls	YTD % projects w/ controls
New Buildings & Major Renovations	115	37	32.2%
Existing Building Retrofit	1,039	389	37.4%
N&RE - Upstream Lighting	23,657	542	2.3%
Statewide	24,811	968	3.9%

► Q1 2020: Upstream continues to drive low controls adoption

Statewide			
C&I Program/Initiative	YTD Lighting Projects	YTD Projects with Controls	YTD % projects w/ controls
New Buildings & Major Renovations	25	7	28.0%
Existing Building Retrofit	358	111	31.0%
N&RE - Upstream Lighting	5,360	172	3.2%
Statewide	5,743	290	5.0%

KPI #4: RATIO OF PROJECTS THAT INCLUDE LIGHTING CONTROLS (C&I)

► Observations for Q1 2020 Data

- New construction for National Grid remains the lone bright-spot
- Upstream delivers low controls adoption across all PAs (<7%)

National Grid			
C&I Program/Initiative	YTD Lighting Projects	YTD Projects with Controls	YTD % projects w/ controls
New Buildings & Major Renovations	7	6	85.7%
Existing Building Retrofit	198	79	39.9%
N&RE - Upstream Lighting	2,823	58	2.1%
Total	3,028	143	4.7%

Unitil			
C&I Program/Initiative	YTD Lighting Projects	YTD Projects with Controls	YTD % projects w/ controls
New Buildings & Major Renovations	0	0	0.0%
Existing Building Retrofit	10	0	0.0%
N&RE - Upstream Lighting	32	2	6.3%
Total	42	2	4.8%

Eversource			
C&I Program/Initiative	YTD Lighting Projects	YTD Projects with Controls	YTD % projects w/ controls
New Buildings & Major Renovations	18	1	5.6%
Existing Building Retrofit	140	31	22.1%
N&RE - Upstream Lighting	2,393	112	4.7%
Total	2,551	144	5.6%

Cape Light Compact			
C&I Program/Initiative	YTD Lighting Projects	YTD Projects with Controls	YTD % projects w/ controls
New Buildings & Major Renovations	0	0	0.0%
Existing Building Retrofit	10	1	10.0%
N&RE - Upstream Lighting	112	0	0.0%
Total	122	1	0.8%

(*Existing Building Retrofit excludes Small Business Turnkey Pathway & N&RE - Upstream Lighting Pathway

KPI #5: ELECTRIC AND GAS NET LIFETIME SAVINGS FROM CUSTOM HVAC PROJECTS

► **Purpose: Understand program performance from a key HVAC delivery pathway**

- Electric measures Included
 - “Custom”
 - Retro-commissioning
 - Energy Management Systems
- Gas measures included
 - “Custom”
 - Controls
 - Heat recovery
 - Retro-commissioning

Program Administrator	# of Electric Projects	Net Lifetime MWh
CLC		
Eversource		
National Grid		
Unitil	-	-
Statewide	30	33,631

Program Administrator	# of Gas Projects	Net Lifetime Therms
Berkshire		
CMA		
Eversource		
Liberty		
National Grid		
Unitil		
Statewide	18	1,356,127

PA Note: Cells shaded in grey represent data unreported due to privacy rules. Included in aggregated statewide number.

KPI #5: ELECTRIC AND GAS NET LIFETIME SAVINGS FROM CUSTOM HVAC PROJECTS

- ▶ **Custom Electric HVAC: Q1 2020 saw less projects and less savings compared to Q1 2019**
- ▶ **Custom Gas HVAC: Q1 2020 saw less projects and less savings compared to Q1 2019**

Statewide	Q1 2019	Q1 2020	% difference
Custom HVAC elec projects	69	30	-57%
Custom HVAC elec savings (Lifetime MWh)	39,679	33,631	-15%
Custom HVAC gas projects	29	18	-38%
Custom HVAC gas savings (Lifetime Therms)	2,576,335	1,356,127	-47%

- ▶ **Reminder: plan was for rebound of HVAC savings in 2019-2021 after downward trend from 2016-2018**

KPI #6: SMALL BIZ TURNKEY MEASURE DIVERSITY

► **Purpose: Provide insight into comprehensiveness of turnkey initiative**

- Small Biz Turnkey program offers –
 - free energy audit
 - Up to 70% incentive
 - 0% interest financing



KPI #6: SMALL BIZ TURNKEY MEASURE DIVERSITY

► Observations for Q1 Data

- ~90% lighting savings for small biz turnkey

Program Administrator	Savings from Lighting Measures	Savings from Non Lighting Measures	% Saving from Non-Lighting Measures
CLC	6,795	1,557	18.6%
Eversource	108,618	14,319	11.6%
National Grid	43,695	2,918	6.3%
Unitil	648	0	0.0%
Statewide	159,756	18,795	10.5%

Program Administrator	Savings from Aerators*	Savings from Non-Aerators	% Savings from Non-Aerators
Berkshire	0	16,459	100.0%
CMA	210,448	122,809	36.9%
Eversource	182,784	48,786	21.1%
Liberty	12,997	0	0.0%
National Grid	231,917	86,658	27.2%
Unitil	0	0	0.0%
Statewide	638,145	274,712	30.1%

► Observations for Q1 Data

- ~70% aerator savings for small biz turnkey

* "Aerators" are defined as aerators, showerheads and spray nozzles.

* All Savings reported are Net Lifetime MWh/Therms

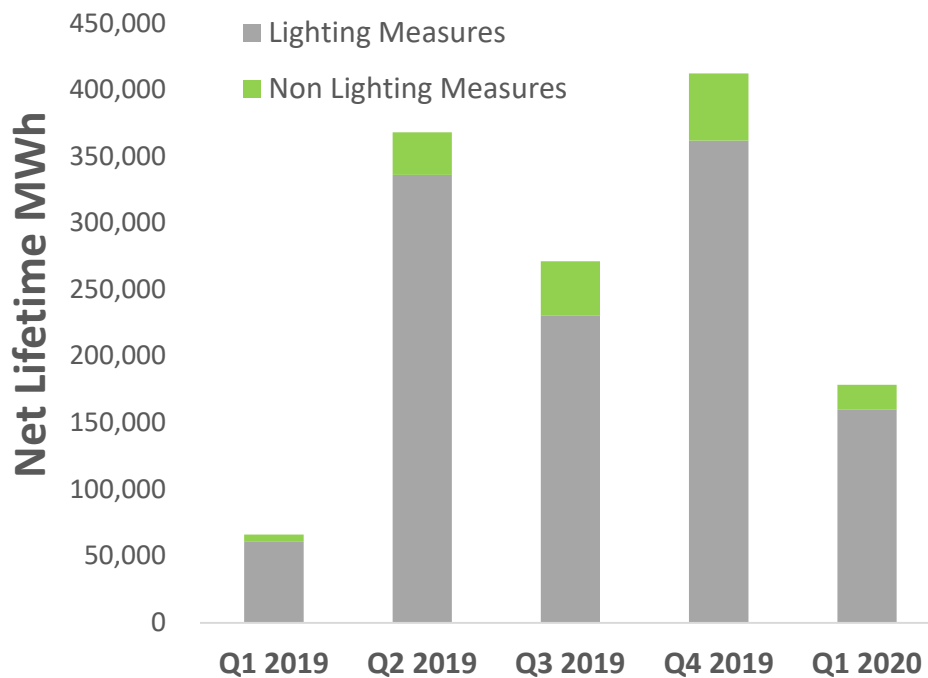
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KPI #6: SMALL BIZ TURNKEY MEASURE DIVERSITY

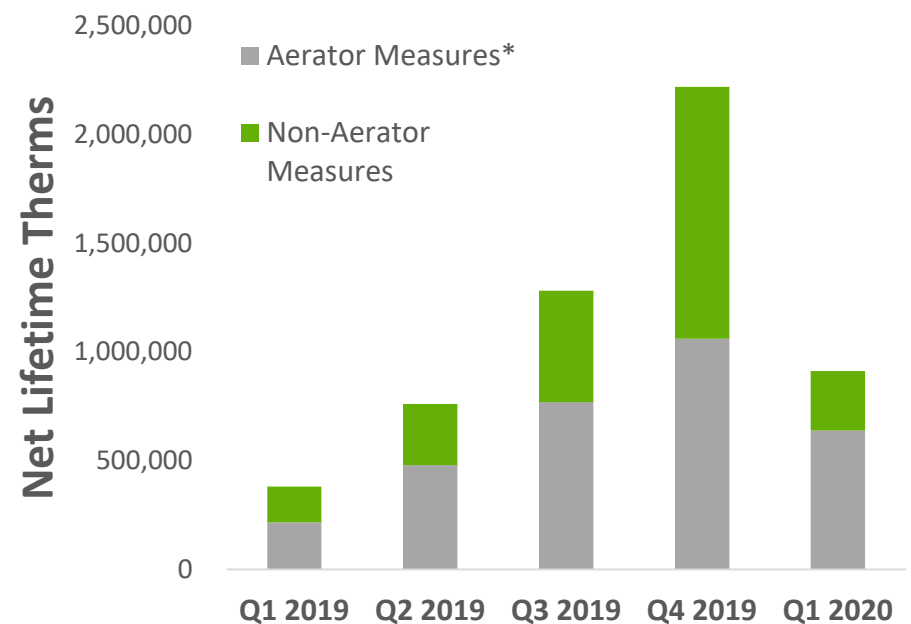
► Observations for Q1 2020 Data

- Modest improvements seen in Q4 2019 have reversed

Quarterly Turnkey Savings - Electric



Quarterly Turnkey Savings - Gas



* "Aerators" are defined as aerators, showerheads and spray nozzles.

* All Savings reported are Net Lifetime MWh/Therms

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