

MA C&I Customer Participation Evaluation

FINAL REPORT

2017 Commercial and Industrial Customer Profile Study Report

Massachusetts Program Administrators and Energy
Efficiency Advisory Council

Date: April 18, 2019



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5.1.2 Participation and savings by consumption size bins

This section presents participation and savings information for the overall statewide electric market by consumption bin. Each analysis presents size bins in broad categories and narrow categories, allowing the reader to view the same information at both a high level and a more granular level.

Table 5-2 shows the participation and savings statistics by broad consumption bins for electric accounts in 2017. Table 5-3 illustrates the same savings statistics but by narrow consumption bin categories, to provide the same information but with more detailed customer sizes. While reviewing these tables, it is important to keep in mind that the largest consumption bins also have smaller populations, which means that each individual participant represents a larger percentage of the population count.

The data show only marginal changes by size bin between 2016 and 2017. The total number of participating accounts increased from 2016 to 2017 for all size bins except “unknown.” Further analysis of this decrease in accounts of unknown size shows that 77% of them are upstream participants. Comparing these results to those reported for 2016 shows that participant savings increased for the 3 smallest size bins, but decreased for the 2 largest size bins. However, the contribution ratio increased for all but the 1.5–4.4 GWh size bin.

One finding of note is that the incentive cost per kWh saved decreased for the 3 smallest bins, both on a per-customer and per-kWh-saved basis. The cost/kWh saved decreased by \$0.01, \$0.03, and \$0.03, respectively, for the 3 smallest size bins. This may suggest that steps taken by PAs to reduce incentive costs, such as the expansion of the upstream delivery pathway, have resulted in more efficient use of program dollars. However, further analysis of the total cost to achieve savings over time is necessary to confirm such a finding, as incentive costs alone do not represent the full cost of service.

Looking at the narrow size bins, we see that the contribution ratio for the smallest bin was greater than 1.0 for a second consecutive year, meaning that this bin contributed a greater share of savings than its share of consumption. The contribution ratio for the 0.01-0.025 GWh narrow bin was also roughly 1.0 (0.99). The contribution ratio for the 25-50 GWh narrow bin was 2.14, meaning its share of overall savings was twice as large as its share of overall consumption.

Table 5-2. 2017 participation and savings by broad electric consumption bin (includes unlinked tracking data)¹⁶

Broad Consumption Bin	2017 Participant Accounts	2017 Billed Customers	2017 Participant Savings (kWh)	2016 Population Usage (kWh)	2017 Total Incentives	2017 Account Participation	2017 Population Savings Achieved	2017 Proportional Contribution Ratio
< 0.11 GWh	8,230	325,206	113,443,414	4,895,898,093	\$34,399,906	2.5%	2.3%	0.91
0.11 – 0.47 GWh	2,808	21,268	91,842,555	4,797,096,971	\$29,266,348	13.2%	1.9%	0.75
0.47 – 1.5 GWh	1,402	5,606	101,837,927	4,703,860,300	\$30,118,864	25.0%	2.2%	0.85
1.5 – 4.5 GWh	714	2,166	102,682,256	5,501,626,209	\$22,400,617	33.0%	1.9%	0.73
> 4.5 GWh	436	756	198,488,252	9,443,463,746	\$43,305,496	57.7%	2.1%	0.83
Less than 0 GWh or missing	7,301	27,627	117,672,773	(777,476,832)	\$27,519,476	see footnote	see footnote	see footnote
Total	20,891	382,629	725,967,177	28,564,468,488	\$187,010,708	5.5%	2.5%	-

Table 5-3. 2017 population participation and savings achieved by narrow electric consumption bin (includes unlinked tracking data)

Narrow Consumption Bin	2017 Participant Accounts	2017 Billed Customers	2017 Participant Savings (kWh)	2016 Population Usage (kWh)	2017 Total Incentives	2017 Account Participation	2017 Population Savings Achieved	2017 Proportional Contribution Ratio
< 0.01 GWh	2,181	202,734	23,398,858	700,438,802	\$5,967,196	1.1%	3.3%	1.31
0.01 – 0.025 GWh	2,059	56,486	24,014,965	956,777,050	\$7,341,162	3.6%	2.5%	0.99
0.025 – 0.05 GWh	1,812	32,619	23,623,531	1,226,424,756	\$7,574,646	5.6%	1.9%	0.76
0.05 – 0.1 GWh	1,864	23,716	32,050,782	1,746,389,959	\$10,633,425	7.9%	1.8%	0.72
0.1 – 0.25 GWh	2,045	17,113	56,608,790	2,777,384,021	\$18,994,893	11.9%	2.0%	0.80
0.25 – 0.5 GWh	1,097	7,061	45,487,598	2,534,978,797	\$13,778,385	15.5%	1.8%	0.71
0.5 – 1 GWh	876	3,710	57,444,626	2,690,441,444	\$17,248,757	23.6%	2.1%	0.84
1 – 2.5 GWh	848	2,691	90,739,013	4,346,262,732	\$22,207,973	31.5%	2.1%	0.82
2.5 – 5 GWh	339	978	60,014,595	3,403,889,779	\$13,357,240	34.7%	1.8%	0.69
5 – 10 GWh	198	373	36,690,545	2,658,019,960	\$8,225,698	53.1%	1.4%	0.54
10 – 25 GWh	149	219	46,990,004	3,349,946,475	\$14,265,551	68.0%	1.4%	0.55
25 – 50 GWh	32	48	88,555,497	1,627,428,889	\$14,346,813	66.7%	5.4%	2.14
> 50 GWh	11	16	16,122,083	1,323,562,655	\$3,951,389	68.8%	1.2%	0.48
Less than 0 GWh or missing	7,380	34,865	124,226,292	(777,476,832)	\$29,117,580	see footnote	see footnote	see footnote
Total	20,891	382,629	725,967,177	28,564,468,488	\$187,010,708	5.5%	2.5%	-

¹⁶ Accounts with zero or negative consumption may be net metered accounts. Unlinked tracking accounts by definition have no associated consumption bin, and are therefore included in the “Less than 0 GWh or missing” bins in these tables.