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Massachusetts C&I Evaluation Contract Project Summary:
2014 C&I Customer Profile

Project Timeframe: March 2015 to March 2016

Program Year(s) Evaluated: 2011 - 2014

Research Area: Market Assessment

High-level Study Objectives: Integrate the Massachusetts PAs billing and tracking data into a single C&I Evaluation Database to generate an in-depth and graphic rich report with cross-PA views of the data at as granular a level as feasible without compromising data confidentiality.

Selected New and Historical Key Findings and Implications

REPORT KEY FINDINGS	•POTENTIAL IMPLICATIONS
The availability of project level upstream lighting data had a significant participation ratio impact, particularly for smaller customers.	•Upstream programs may be increasingly important avenue of customer engagement, particularly for small and mid-size accounts.
Mid-size electric customers have contributed a greater share of the savings relative to their share of consumption each year since 2011.	•PAs appear to have found strategies to better engage mid-size accounts; lessons from this success may be applicable to the more populous 75-300 kW account class.
Town level consumption weighted participation over the last four years indicates that PAs have engaged many of the larger customers recently.	•Larger customers who have engaged recently may experience some degree of customer fatigue, even when there is still opportunity for energy efficiency savings.
Electric PA savings increasingly come from a larger population of smaller saving projects.	•Electric PAs have found effective means - upstream and otherwise - to engage accounts in installing smaller savings measures; positive experiences here may serve as a foot in the door to larger measures in the future.
Pre-rinse spray valves are a key, but declining, driver of gas participation.	•Future year's gas participation may decline as spray value installs slow down unless a new "plug-and-play" measure is leveraged.
Approximately half of all accounts from 2011 - 2014 are new accounts to the C&I dataset.	•In instances where these new accounts are opened at locations that previously had participated in an efficiency offering, there may not be the same opportunities for savings because upgraded equipment typically stays with the premise in a sale or lease changeover.
Gas PAs engaged 25% of their collective consumption-weighted population in 2014 (up from 20% in 2013).	•As larger gas account populations saturate on participation there may be a risk of customer fatigue in participants and need to leverage smaller accounts.
The correlation between annual savings and annual consumption is higher for gas accounts than it is for electric accounts.	•Gas PAs may be more reliant on prescriptive offerings in the mid-size customer classes; increased leveraging of custom offerings here may facilitate greater savings opportunities.
Since 2011, Single PA served towns experience higher gas participation than dual PA served towns.	•Coordination – particularly for smaller and midsize accounts – appears to be strong across fuels when the account is served by one PA than it is across PAs.
Large outlier and strategic accounts can have very substantial singe year contributions to meeting goals.	•In the absence of these accounts participating PAs may have large year-over-year variability in savings ratios.
PAs all have instances where 2014 savings exceeded the matched accounts 2013 full extrapolated consumption.	•These accounts disproportionally impact percentages by having apparent savings ratios great than 100%. There is no indication that savings or consumption are incorrect but rather this is likely an artifact of how the data is collected.
Custom projects continue to be a key source of gas and electric PA savings.	•The effective engagement of accounts - particularly large ones - with energy efficiency solutions that meet their individual needs remains an essential tool to derive savings.
Multi-year participants are small population, but key driver of savings.	•Multi-year participants tend to be larger accounts, but with only 6% and 7% electric and gas as multi-year respectively, there may be multi-year opportunity in the mid-size class.

For full report see: 2014 C&I Customer Profile Report on the EEAC website, http://ma-eeac.org/studies/

2014 C&I Customer Profile - Base Analysis Report Summary (cont.)

Comprehensive Observations and Recommendations Matrix

The 2014 C&I Customer Profile report included both recommendations and new to 2014, observations. Observations are to recognize opportunities of interest or more speculative findings that may not have a clear recommendable action or outcome but merit acknowledgement.

Recommendations		
Data Capture	Recommendation 1	Where possible, capture the account number as a data field in the upstream lighting and HVAC data.
	Observation 3	Continue to leverage the C&I Evaluation Database as a repository to integrate standardized data categories across all PAs data to facilitate apples-to-apples comparisons.
	Observation 4	Future analyses may wish to leverage results from currently underway studies on population equipment inventories to better quantify town level potential remaining.
Additional Analysis Insight	Recommendation 5	Build on the existing town level analyses to identify if statistically significant hot/cold spots and clusters of participation and savings exist across and within PA territories.
	Recommendation 7	Conduct a deeper assessment into accounts with savings ratios in excess of 100% prior year's full modeled consumption
	Recommendation 8	Refine, with PA and EEAC guidance, the existing metrics in the Customer Profile and integrate additional account-level analyses that can be reported at the population level[1]
	Observation 2	Engagement of multi-year participants may result in apparently lower savings achieved within individual years for these customers. This is not necessarily a negative trend.
	Observation 5	Locational based analysis may provide a new and increasingly important analysis cut, particularly in the time series data.
	Observation 7	Outlier accounts present special cases in the C&I profile and a more systemic definition about what constitutes an outlier may yield greater insight into the impacts of this population
Increase Reporting Insight	Observation 1	Leverage PA implementation and policy team knowledge to better contextualize data findings and qualify impacts of changes in program offerings or strategies.
	Observation 6	Coordination with the residential evaluation database and customer profile could improve insight into the PA landscape, particularly for accounts like multi-family housing.
Possible Study Opportunity	Recommendation 2	Assess what approaches or strategies have increased the contribution ration for mid-size electric customers, and if or how these might translate to the next smaller demand bin.
	Recommendation 3	Assess if customer fatigue in program participation exists, particularly for large consumption weighted accounts.
	Recommendation 4	Continue to identify ways to increase small and mid-size gas account participation in towns that are served by a different gas and electric PA.
	Recommendation 6	Assess what approaches have been effective in securing multi-year participants and how these may translate to accounts outside the larger demand classes

Findings & Recommendations / Observations Matrix	R1	R2	R3	R4	R5	R6	R7	O1	O2	O3	O4	O5	O6	O7
Key Findings														
New project level upstream lighting had significant participation impact, particularly for smaller customers.	x	x				x	x	x	x	x				
Mid-size electric customers have contributed a greater share of the savings relative to their share of consumption each year since 2011.		x		x	x			x						
Town level consumption weighted participation over the last four years indicates that PAs have engaged many of the larger customers recently.			x	x	x			x			x	x		x
Electric PA savings increasingly come from a larger population of smaller saving projects.	x	x							x					
Pre-rinse spray valves are a key, but declining, driver of gas participation.				x		x		x						
Approximately half of all accounts from 2011 - 2014 are new accounts to the C&I dataset.					x			x				x		
Gas PAs engaged 25% of their collective consumption-weighted population in 2014 (up from 20% in 2013).				x								x		x
The correlation between annual savings and annual consumption is higher for gas accounts than it is for electric accounts.										x				
Since 2011, Single PA served towns experience higher gas participation than dual PA served towns.				x				x			x			x
Large outlier and strategic accounts can have very substantial singe year contributions to meeting goals.			x		x		x	x				x		x
PAs all have instances where 2014 savings exceeded the matched accounts 2013 full extrapolated consumption.	x						x	x	x					
Custom projects continue to be a key source of gas and electric PA savings.			x											
Multi-year participants are small population, but key driver of savings.	x		x	x		x			x	x				

[1] Recommendation 8 is not tied to a specific key finding, for this reason it is not included in the matrix. It reflects a recommendation by the PAs and EEAC that the Customer Profile team look at ways to shorten the report and continue to provide new insights into the data as the report enters its fifth year.