Deep Dive Report – HVAC Trends
City level analysis

Friday, February 9, 2018
Key findings and considerations

Electric

- Electric participation in the western portion of the state appears to have at least a casual relationship with towns served by gas PAs
  - Towns outside the gas territory that relied on delivered fuels consistently lacked participation though time.
  - DNV GL was not examine the underlying drivers of this potential relationship as this type of analysis would fall outside the normal scope of the C&I Customer Profile report, however any future analyses – particularly at the locational level – may benefit from understanding this relationship and opportunities for strategic electrification or fuel switching.
  - Small populations in rural areas can have a large visual impact on participation percentages; caution should be exercised on visual extrapolations.

- Starting in 2013 there appears to be a participation increase in HVAC across the state

- Savings as a percentage of consumption is consistently higher around Boston and in the Northeastern portion of the state.
  - With the continued aggregation of geographic data, any future analysis may benefit from the integration of economic indicators, even if this data is only available at the zip code level.

Gas

- Participation increased statewide in 2013; the core drivers appear to be an increase in the number of controls, insulation, and furnace measures implemented.

- Participation over time has increased notably in the northeastern portion of the state; savings ratios also increased.

- Participation and savings as a percentage of consumption are consistently higher around Boston.
  - Future analysis may benefit from the integration of economic indicators to understand if there is a causal correlation that can be leveraged by the PAs.
Time series of participation rates - electric
2011 Town Level Account Participation Ratio Installing an HVAC Measure

- Not Served by Electric PA
- Towns Served by both an Electric and Gas PA
- No Participants Identified
- 0.01% - 0.25%
- 0.26% - 0.5%
- 0.51% - 0.75%
- 0.76% - 1%
- Greater than 1%
2013 Town Level Account Participation Ratio Installing an HVAC Measure

- Not Served by an Electric PA
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- No Participants Identified
- 0.01% - 0.25%
- 0.26% - 0.5%
- 0.51% - 0.75%
- 0.76% - 1%
- Greater than 1%
2014 Town Level Account Participation Ratio Installing an HVAC Measure

- Not Served by Electric PA
- Towns Served by both an Electric and Gas PA
- No Participants Identified
- 0.01% - 0.25%
- 0.26% - 0.5%
- 0.51% - 0.75%
- 0.76% - 1%
- Greater than 1%
2015 Town Level Account Participation Ratio Installing an HVAC Measure

- Not Served by Electric PA
- Towns Served by both an Electric and Gas PA
- No Participants Identified
- 0.01% - 0.25%
- 0.26% - 0.5%
- 0.51% - 0.75%
- 0.76% - 1%
- Greater than 1%
2016 Town Level Account Participation Ratio Installing an HVAC Measure

- Not Served by Electric PA
- Towns Served by both an Electric and Gas PA
- No Participants Identified
- 0.01% - 0.25%
- 0.26% - 0.5%
- 0.51% - 0.75%
- 0.76% - 1%
- Greater than 1%
Time series of population savings achieved - electric
2013 Gross HVAC kWh Savings as Percent of Town Consumption

- Not Served by PA
- Towns Served by both an Electric and Gas PA
- No Savings Ratio Calculated
- 0.01% - 0.05%
- 0.06% - 0.1%
- 0.11% - 0.25%
- 0.26% - 0.5%
- Greater than 0.5%
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Time series of participation rate - gas
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Time series of population savings achieved - gas
2011 Gross HVAC Therm Savings as Percent of Town Consumption

- Not Served by PA
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