

## Massachusetts C&I Evaluation Contract Project Summary: Upstream HVAC Initiative Process Evaluation

Project timeframe: February 2016 – September 2017

Program year(s) evaluated: 2014 – 2016

Research area: Process Evaluation

**High-level study objectives:** Investigate the Initiative's current impact on the market, reasons for absence of greater uptake by participating distributors and differences in participation levels, and changes to increase participation.

### Selected recommendations and key supporting findings

**We recommend that the Initiative update the incentivized technologies to include Variable Refrigerant Flow.**

- Representatives of all surveyed groups including program managers and implementers, non-Massachusetts program managers and market actors, noted that VRF technology should be included among the technologies incentivized by the Initiative.
- We note that the VRF technology should only be included if determined by program implementers to be cost-effective and appropriate for the market and the upstream delivery model. At the time the report was being finalized the PAs were in the process of adding the measure to the initiative.

**We recommend that the Initiative address the lengthy rebate processing times.**

- The current rebate processing times present a barrier to participation for distributors, especially those who find it difficult to bear the "carrying costs" of providing the discounts on the energy-efficient equipment and then waiting a long time for the program to reimburse them.
- We note that the new program vendor was brought on, at least in part, to address administrative burdens and processing times.

**We recommend that the Initiative develop a focused marketing campaign.**

- Review of best practices and program marketing to date suggests implementation of a marketing approach that both demonstrates the value of the incentives to distributors and end-users and can be leveraged to increase knowledge and awareness among targeted populations, including contractors and end-users.
- An intentional marketing plan which focuses on the more effective methods for interaction and long-term engagement with distributors will foster increased awareness and knowledge of the Initiative. Therefore, the PAs should review and consider adopting the marketing best practices employed by the non-MA programs contacted for this research effort.

## Upstream HVAC Process Evaluation Final Report Summary (cont.)

### Comprehensive findings and recommendations matrix

Recommendations	
Recommendation 1	Update the incentivized technologies to include VRF
Recommendation 2	Address lengthy rebate processing times
Recommendation 3	Develop a focused marketing campaign
Consideration 1	Consider dropping lower volume or smaller equipment from the Initiative
Consideration 2	Increase consistency of incentive structure
Consideration 3	Increase incentive levels
Consideration 4	Continue to foster long-term relationships with distributors based on constant engagement
Consideration 5	Conduct targeted research on geographic areas where HVAC equipment is particularly old to investigate barriers to replacement

Findings	Recommendations & Considerations							
	Recommendation 1	Recommendation 2	Recommendation 3	Consideration 1	Consideration 2	Consideration 3	Consideration 4	Consideration 5
The key structural difference between participating and non-participating distributors is the perceived ability to cope with the administrative burden of participation in the program		X						
Barriers to greater program activity include lack of contractor and end-user demand, lack of contractor education, inadequate incentive levels, and perception of administrative burden		X	X				X	
Most market actors suggested adding Variable Refrigerant Volume (VRF) incentives	X							
Small incentive/savings and low-volume measures may not be cost-effective to incent				X				
Long rebate delivery times and related administrative burden are the greatest challenge		X						
Stakeholders reported that incentives do not cover incremental cost of higher efficiency					X	X		
Portion of incentive passed-through varies by distributor					X	X		
Initiative marketing appears infrequent and ad-hoc			X				X	
Other jurisdictions successfully market by strategic outreach at trade shows and other venues			X				X	
Research found deep collaboration and constant distributor engagement crucial			X				X	
Focus on largest distributors that control majority of market typically successful			X				X	
Upstream programs require constant engagement over time to succeed							X	
At least one third of program-eligible HVAC units are either past or close to end of EUL								X
Variations in average equipment age found among different equipment types								X
Variations in average equipment age found among utility service territories								X
Mid-sized businesses had the highest percentage of older equipment for two of the three largest equipment types								X
Site contacts were reasonably accurate in estimating equipment age ranges								