

Massachusetts C&I Evaluation Contract Project Summary: Assessment of the Drivers of Net-to-Gross

Project Timeframe: Apr. 2016 – Mar. 2017

Program Year(s) Evaluated: various

Research Area: Net-to-Gross

High-level Study Objectives: Identify the factors that drive net-to-gross results related to program design, project characteristics, and customer characteristics

Considerations & Key Supporting Findings

Consider adding questions to the rebate application regarding the condition of existing equipment and the allocation of funds prior to receiving program information.

- The survey re-analysis and the literature review both found that the allocation of funds prior to receiving program information leads to a decreased NTG. In addition, the study found that customers whose primary motivation was to replace failed equipment also have lower NTG. The team recommends that questions on these two topics be added to prescriptive rebate applications in order to identify projects that are more likely to yield a lower NTG, which could serve as one method to flag likely free-riders in the event that programs attempt to screen out such projects in the future.

Consider emphasizing early replacement programs.

- The survey re-analysis found that customers whose primary motivation was to replace poorly working equipment or to improve energy efficiency have higher NTG. Therefore, we recommend emphasizing early replacement initiatives that encourage customers to replace equipment prior to failure.

Consider targeting customers who require financing.

- Customers who utilized the interest-free financing had lower free-ridership rates than customers who did not, possibly because companies who receive financing assistance may not have sufficient capital to fund projects. Consider targeting these customers in the future in order to raise NTG values.

Consider targeting customers with or expanding access to dedicated account representatives.

- The survey re-analysis results suggest that customers with dedicated account representatives exhibit lower free-ridership than those without such representatives, even after controlling for customer size. If the programs are not already targeting customers with account representatives, consider doing so. In addition, assigning account representatives to the next tier of customers could help increase NTG.

Consider collecting consistent equipment cost data.

- The survey re-analysis incorporated the incentive amount to control for the impact of project size and rebate amount on free-ridership and spillover. However, the incentive as a percentage of measure cost would better reflect the factors considered by customers. In addition, future modeling could test the effect of a higher incentive-to-cost ratio on free-ridership rates, which may lead to recommendations regarding optimal incentive levels. Therefore, the evaluation team recommends that all programs collect consistent data on equipment cost so it is possible to include the rebate/cost ratio in future NTG studies.

Consider adding questions to the future Cross-cutting free-ridership and spillover surveys to help identify NTG drivers.

- While the survey re-analysis was able to address some of the drivers identified in the literature review, the use of previously collected survey data limited the breadth of variables included in the modeling effort. Therefore, we recommend adding the following questions to future Cross-cutting free-ridership and spillover surveys.
 - Has the organization previously installed this measure in any facility?
 - Did the organization install the measure due to automation or another workplace benefit?
 - Has the organization faced any recent cutbacks to budgets or staffing?
 - Is the organization part of a regional or national chain?

Assessment of the Drivers of Net-to-Gross (cont.)

Comprehensive Findings and Recommendations Matrix

Recommendations	
Consideration 1	Consider adding questions to the rebate application regarding the condition of existing equipment and the allocation of funds prior to receiving program information.
Consideration 2	Consider emphasizing early replacement programs.
Consideration 3	Consider targeting customers who require financing.
Consideration 4	Consider targeting customers with or expanding access to dedicated account representatives.
Consideration 5	Consider collecting consistent equipment cost data.
Consideration 6	Consider adding questions to the future Cross-cutting free-ridership and spillover surveys to help identify NTG drivers.

Findings	Recommendations					
	Consideration 1	Consideration 2	Consideration 3	Consideration 4	Consideration 5	Consideration 6
Literature Review						
Projects that were conceived after the organization had discussions with program staff may yield higher NTGs	X					
Measures that were installed to replace failing equipment may exhibit higher free-ridership because the participant would have purchased new equipment without the program.	X	X				
Projects implemented for non-energy reasons but that also provide energy efficiency benefits may result in lower NTG.						X
Survey Re-analysis						
Participants who allocated project funds prior to receiving program information exhibited higher free-ridership rates (+0.11 for electric and +0.20 for gas) than participants who had not pre-allocated funds.	X					
Participants who utilized interest-free financing have lower free-ridership rates (-0.05 for electric and -0.29 for gas) than those who did not.			X			
Customers with account representatives have significantly lower free-ridership rates (-0.07 for electric) despite controlling for energy usage				X		
Electric program participants who report equipment failure as their motivation have higher rates of free-ridership by +0.10.	X	X				
Energy efficiency as a primary motivation for measure implementation lowers free-ridership rates by -0.13 for electric programs and -0.11 for gas programs.		X				
Other motivational factors that appear to influence free-ridership include reducing maintenance cost (-0.06 lower free-ridership) for electric program participants and energy savings (-0.08 lower free-ridership) for gas program participants.		X				
Poorly working equipment as the main motivation for participation was one of the few significant factors impacting spillover, increasing electric spillover rates by +0.15.		X				
Several possible drivers, in particular the incentive-to-cost ratio, were not incorporated into the survey re-analysis due to the lack of available data.					X	X