

Measuring Future Market Effects: Prospective Benefits Analysis for NYSERDA's Commercial New Construction Program

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Introduction

Just because a program ends, the savings associated with it do not necessarily have to end as well. In fact, many energy efficiency programs have market transformation effects that continue to generate savings after the program has ended – and they are rarely quantified and considered in future cost-effectiveness determinations.

This poster presents NYSERDA's pilot analysis of the *prospective benefits* of the Commercial New Construction Program. Prospective benefits are a near-term forecast of savings to be realized from program-promoted measures that are implemented after the program ends. For market transformation efforts, the goal is to change the market such that benefits continue after removing the program. This work helps to determine the most optimal time for program removal, provides a new way to consider program effectiveness, and quantifies short-term market transformation impacts – thus advancing the difficult task of determining total life-cycle program benefits.

Research Design

The prospective benefits analysis is based on an assessment of the percentage of current annual incremental program benefits that can be expected to persist after the program's hypothetical termination (the program is still running). The analysis started with the 2007 incremental net GWh and MW savings – a reasonable expectation of future annual program savings if the program continued – and adjusted these savings by expected changes in the supply of and demand for program measures after the program ends. This adjustment was made through use of *Prospective Benefit Factors* (developed through interviews with participating and non-participating market actors). Prospective Benefit Factors take on a value between 0 and 1 to reflect the percentage of current savings that is expected to persist after the program ends. For example, a factor of 0.7 means that 70% of current annual program savings are expected to still be realized after the program ends. The evaluation also calculated and used *Attribution Weights*, which estimate the level of program influence on the respondents' future actions.

Findings

Estimated short-term prospective benefits for NYSERDA's Commercial New Construction Program are approximately 60 GWh and 17 MW per year, representing between 70% and 80% of 2007 net energy and demand savings. The level of a program's prospective benefits will depend on the program design, the maturity of the program, and the level of market transformation already achieved. The Commercial New Construction Program was selected for this pilot evaluation because it had achieved high spillover levels, making prospective benefits likely. Few programs could be expected to produce this high level of prospective benefits.