The Extra Mile: Searching for Indirect Market Effects?

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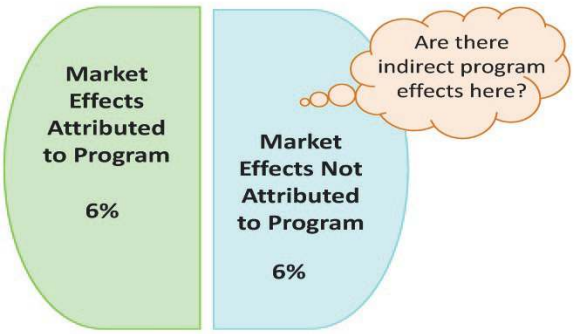
Introduction

An ongoing challenge in estimating program-related savings is that program impacts may be entirely invisible to the market actors. While some efficiency programs may well be designed to increase the availability of efficiency products and improve the efficiency of construction practices, the ripple effects from these program activities may not be associated by market actors with the efficiency program.

This poster presents an overview of an evaluation that was designed to estimate non-participant spillover (NPSO) and also included an initial pilot effort to quantify indirect market effects. This work was part of an impact evaluation of the New York State Energy and Research Development Authority's (NYSERDA) commercial New Construction Program (NCP). To estimate market effects and NPSO, telephone surveys of non-participating design team members (architects, engineers and contractors) were conducted.

The primary basis for estimating both NPSO and market effects was the market penetration gains by measure as reported by the non-participating design teams, as this estimate provided the upper bound for potential program-related savings. The NPSO savings were defined as the portion of the market penetration gains attributed directly to the program by the design teams. Evaluators then assessed whether there could be program activities that were unknown to the design team members.

Figure 1. Is There a Portion of Market Change Due to Invisible Program Effects?

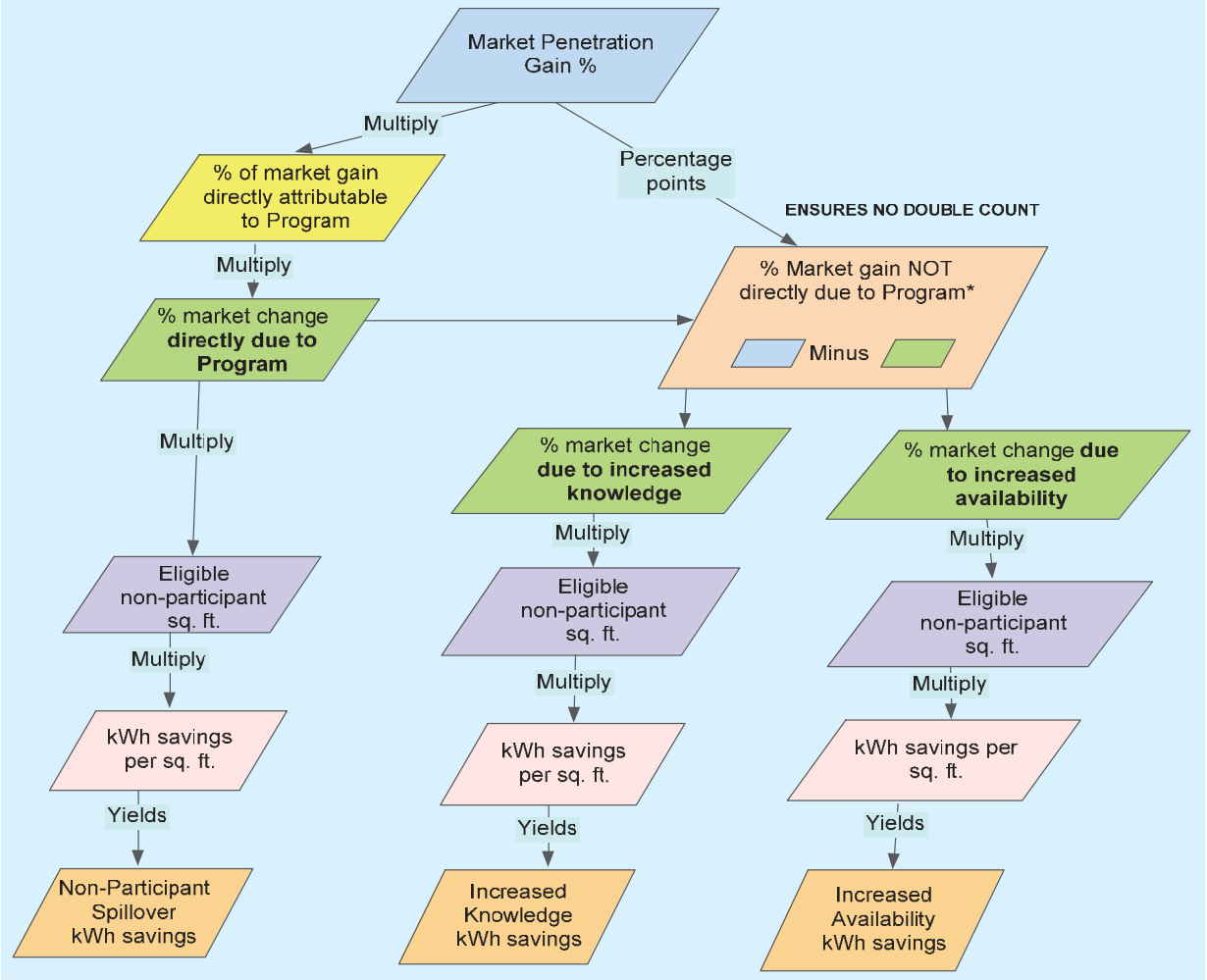


The next question, as illustrated in Figure 1, was whether any of the remaining improvement in efficiency could also be associated with the program. Survey respondents were asked to the assess the relative importance of eight factors that may influence the adoption of energy efficient technologies and practices, such as higher energy prices, increased availability of high efficiency products, increased knowledge of efficient construction practices, and awareness of environmental consequences of energy use. Of these eight influential factors, two were identified as related to NYSERDA program activity through a review of the program logic models: increased availability of efficient products and improved knowledge of efficient construction practices. Further analysis was used to quantify the savings that

[1] We wish to thank Jennifer Meissner (NYSERDA) for the initial issues and concept discussions that were the genesis for this work. That brainstorming enabled the pilot study to be designed and undertaken.

could be related to program activities. An overview of the method is shown on the poster and included here as Figure 2.

Figure 2. Overview of NPSO and Indirect Market Effects Method



The indirect market effects were estimated as 22% of the program impact.

The poster considers several overarching questions about how to improve estimates indirect program-induced market effects and explores whether an acceptable method to attribute savings from these indirect effects to the program will allow them be valued in regulatory and policy venues.

Searching for Indirect Market Effects?

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The views expressed in this poster are those of the authors and do not necessarily reflect the views of the New York State Energy Research and Development Authority (NYSERDA).

Commercial New Construction Program (New York State Energy Research and Development Authority (NYSERDA))

Impact Evaluation Non-Participant Spillover Analysis:

- Dodge new construction: Design teams of non-participating projects
- Design Team was asked about market penetration by measure currently and two years ago
- The difference between the two is the market change
- They were then asked what percentage of the market change could be attributed to the Program
- Percent of Influence * Market Change = NPSO estimate

Market Effects Attributed to Program

6%

Are there indirect program effects here?

Market Effects Not Attributed to Program

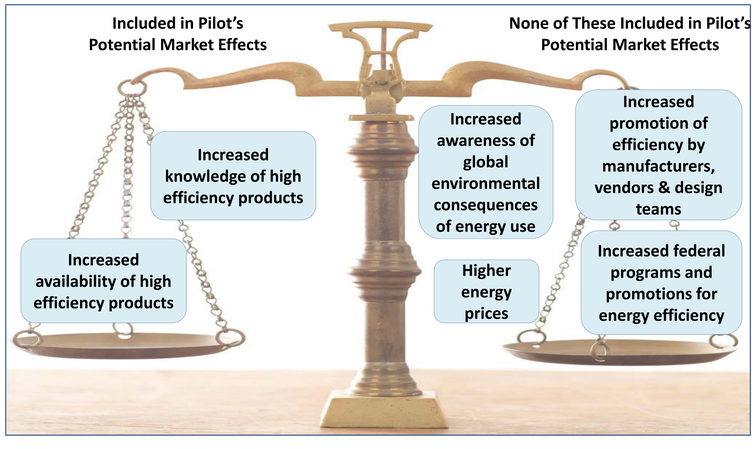
6%

Extract from Program Logic Model

Program is designed to effect the market by changing the following:

- Knowledge of energy efficiency
- Availability of high efficiency measures and practices
- Promotion of energy efficiency by architects and engineering firms and retailers
- Behavior and decision-making regarding investing in high efficiency in new construction and major renovations

Estimating the Uncaptured Market Effects Potential



Uncaptured Market Effects = 17% of program savings

Key Questions:

- How are these potential savings related to the actions as defined in the program logic model and implemented by the program administrator?
- How can evaluators reasonably attribute savings to the program versus those that are due to other factors?
- Is there a defensible mechanism to measure these savings and allow the program administrator to claim them?
- If there is no method to attribute savings from these indirect effects to the program, can they still be valued in regulatory and policy venues?