

The Gap/Overlap Market Characterization Method — A Unified Approach to Evaluating Energy Efficiency Portfolios

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Purpose

As the market place and funding sources for energy efficiency (EE) programs continues to change, having a crystal clear picture of the EE landscape is becoming more important than ever. To provide this picture, we introduce a comprehensive and unified approach to assessing the energy efficiency landscape by submitting the entire EE portfolio to a Gap/Overlap Market Characterization Method (GO). The GO method reveals both redundancies and opportunities, providing a spatial view of the EE portfolio to ensure efficient allocation of public energy efficiency (purpose) funds.

GO has proven an effective analysis tool for both post-program analysis, and program development. This method was initially used for the evaluation of the 1998 Third-Party Initiatives (TPI) Program for the California Board for Energy Efficiency. GO was most recently applied to the development of PG&E's Residential Renovation and Retrofit Program. In both cases, the GO method successfully provided meaningful results to assist the development of more effective energy efficiency programs.

Approach

Our approach builds upon, and expands, the existing Theory and Practice of Market Transformation. Using Eto Prael et. al. as a basis, we classify each existing program and each desired or planned program using a standard market assessment template which highlights the market served, the technology or service assessed, market barriers addressed, delivery mechanism, cost-effectiveness, etc. The market assessment template ensures a consistent classification of each program to ensure no bias in the assessment. The approach described above treats the energy efficiency programs as stock portfolio – it provides a uniform “valuation” method to ensure diversity in the energy efficiency portfolio.

The GO method involves five primary steps: 1) Market Definition, 2) Market Actor Characterization, 3) Market Barrier Identification and Rating, 4) Intervention Strategy Identification and Rating, 5) Market Effects/ Market Effects Indicators Identification and Rating. Each of these steps is described in detail below.

- 1. Market Definition.** This first step in the GO method establishes the size and scope of the market to be characterized. This step identifies and describes high potential impact technologies (in terms of both energy use and the potential for reductions in energy use) and the current and future role for market transformation is evaluated. For example, in order to assess the effectiveness of a duct repair program, we must first know all the technologies used to complete duct repairs, their use and cost, and the real-life experiences of people who repaired ducts with these products to identify potential reasons for embrace or rejection of each technology.
- 2. Market Actor Characterization.** Stemming from the Market Definition, this step identifies the relevant market actors on both the supply and demand sides, and the interrelationships between them. The interrelationship discovery is a crucial step in developing the pathway to the highest potential impact (in terms of energy efficiency) for program intervention strategies. In addition, this step identifies market actors who, while they may not be directly in contact with the product, have influence on the other actors in the market. The lay press and the trade media exemplify these types of actors.
- 3. Market Barrier Identification and Rating.** Each market actor faces different combinations of barriers to full participation in the market. These barriers are identified through primary data sources, where the strength of each barrier, which can vary according to each market actor, is assessed as low, moderate, or high, using both quantitative and qualitative results.
- 4. Intervention Strategy Identification and Rating.** As they apply to each market actor, both existing and potential program intervention strategies are identified and rated. This step, using primary data,

also allows for the consideration of new types of intervention strategies as recommended by market actors in step 3.

5. **Market Effects/ Market Effects Indicators Identification and Rating.** As linked to each market actor, the effects of intervention strategies on the market are assessed as primary or secondary. A primary rating indicates that the effect is the strongest, most reliable indicator of a market change. While those rated as secondary are also reliable, they are generally not as strong, and may not hold for all situations.

Findings and Relevance

Using the five steps of GO (Market Definition, Market Actor Characterization, Market Barrier Identification and Rating, Intervention Strategy Identification and Rating, Market Effects/ Market Effects Indicators Identification and Rating) strategies, elements and actors, have been identified and classified. Gaps and overlaps in the coverage of the EE landscape easily show, and can be identified as targets for program change. The GO provides a consistent spatial viewpoint which permits a clear assessment of the energy efficiency landscape to ensure that programs are innovative, cost effective and desired.