
Planning and Evaluating Market Transformation: What the Industry has Learned, and Possible Implications for California

Ralph Prah and Ken Keating
CPUC Market Transformation Indicators Workshop
San Francisco, CA
November 7, 2011

Proviso

- The opinions and interpretations expressed here are those of the authors alone, and do not represent those of the CPUC.

Outline

- Introduction
 - MT Planning and Policy Issues
 - Other states
 - CA-specific policies
 - Strategic Market Transformation
 - Evaluating MT and Market Effects
 - Lessons learned
 - Potential implications for the CA MTI process
-

Introduction

- In the mid to late-'90s, CA was in the vanguard in planning, implementing and evaluating MT
- But for most of the past decade, CA has been primarily focused on resource acquisition
- The CA Strategic Plan and the subsequent CPUC directives have elevated MT to a statewide priority again.
- In this context, we ask two questions:
 1. What has the industry learned about the planning and evaluation of MTI initiatives in 15 years?
 2. What are the potential implications for CA, and for the MTI process in particular?

How Others Have Viewed MT

- Both NEEA and NEEP were set up to target a core competency around MT.
 - Both have found themselves also providing infrastructure and support for acquisition programs, but are not simply alternative acquisition entities.
 - They see MT as a strategic approach to targeted markets
- NYSERDA viewed MT as a way to achieve EE by changing some markets so that private enterprises would carry on. (It was a tool for economic development too) MT was foremost a policy goal.
- Wisconsin has had a clear distinction between MT and acquisition programs (2003-2009), with both being important, but with MT as a deliberate intervention – more of a tool than a general policy.

California's Policy Evolution on MT

- In the late 90's, despite the early work by Eto, Prahl, and Schlegel (and the stillborn CBEE), the CPUC and the CEC both saw MT as a way to privatize EE costs. A policy goal.
- CA's 2011 Strategic Plan (SP) references the earlier definitions, and MT is a policy goal, but the goal is no longer to privatize energy efficiency, but to make it the standard practice or a requirement of codes and standards. It also added:
 - It was also a strategy, part of a balanced portfolio
 - It needed other partners in the market
 - It isn't an end-point for a market but an evolving step

CA Evolution (cont.)

- In D.09-09-047 (p.89), The CPUC made several updates to the previous definitions: “We modify the existing Commission definition of market transformation to state (changes noted in italics):

“Market transformation is long-lasting, sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where *continuation of the same publicly-funded intervention is no longer appropriate in that specific market. Market transformation includes promoting one set of efficient technologies, processes or building design approaches until they are adopted into codes and standards (or otherwise substantially adopted by the market), while also moving forward to bring the next generation of even more efficient technologies, processes or design solutions to the market.*”

CA Evolution (cont.)

- This is still a perspective that sees MT as a policy end-point in specific markets, but doesn't either eliminate or specifically call for what we are calling Strategic Market Transformation

Strategic Market Transformation

- This views MT as a proactive effort, not an aspirational outcome.
- Transforming markets can be hard –it may not work
- Not all markets can be transformed and not all acquisition programs will transform markets.
- Acquisition programs can support and be part of a strategic intervention.
- A strategic effort must be informed and focused to be actionable – and, frankly, evaluable.
- History has shown powerful examples of success.

Elements of Strategic MT

- Market defined and delimited
- Market dynamics understood – barriers and opportunities
- Market/product nexus must be large to justify effort.
- A detailed and coherent market and program theory needs to be documented – logic model
- A baseline is usually required to define progress and make targets concrete
- Use all market tools available to achieve goals.

Evaluating Market Transformation and Market Effects

- For most of the last decade, California's evaluation efforts focused mainly on supporting its ambitious resource acquisition goals
- Meanwhile, market effects research proceeding continuously in the Northeast, Northwest, and Wisconsin
- As a result, most experience with market effects research has occurred outside of California
- What are the implications of this experience for California's effort to develop and track market transformation indicators?

Market Effects Research: Lessons Learned

1. Effective planning and evaluation of MT initiatives requires regular, ongoing research into the status of the market
 - At inception, to understand market's leverage points
 - During program, to assess performance (and, if necessary, redirect program)
 - After program has ended, to assess sustainability of effects
 2. The program theory is critical
 - Need a clear, detailed, long-term theory explaining which market indicators will change in what order
 - Evaluation focuses on comparing how actual evolution of market compares to program theory
 - However, sometimes the program theory needs to be refined based on evaluation feedback
 1. Interpretation relies on a preponderance of evidence
 3. Effective evaluation requires a combination of leading/interim and lagging/long term market indicators
-

Lessons Learned (cont.)

4. Evaluation of the effectiveness of market transformation initiatives can typically be done only qualitatively – but this is good enough
5. Market effects evaluations of programs not specifically designed as market transformation initiatives tend to face particular challenges
 - Resource acquisition programs can and do often produce market effects
 - It is worth trying to measure these, but often...
 - The needed long-term program theory will be lacking
 - The study will need to be done as a one-shot effort
 - Competition with traditional impact evaluation will lead to the study being poorly funded

Potential Implications For California's MTI Process

1. **Some tension between effective evaluation of individual MT initiatives and of overall progress towards CA's market-related strategic policy objectives**
 - Bottom-up evaluation of MT initiatives must be driven by specific program theories
 - Top-down evaluation of progress toward strategic policy objectives must be driven by the CEESP
 - Ideally, the specific program theories and the CEESP will be in alignment, but arguably this is not yet the case
 - MTI framework developed by ED represents an attempt to resolve this tension
2. **MTIs by themselves will not be sufficient to guide the evaluation of specific market transformation initiatives**
 - MTIs are driven in large part by global policy objectives, and thus do not constitute a specific program theory
 - Because policy objectives do not focus solely on market transformation, overall metrics framework includes many indicators focused on other outcomes

Potential Implications for California's MTI Process, Continued

3. It can be confusing to assume that every program will lead to market transformation
 - Confusing for evaluation in general
 - May lead to lots of efforts to look for market effects from programs not explicitly designed as MT initiatives
 - This is a legitimate activity, but one that we have seen can be fraught with challenges
4. Also some potential for confusion in the MTI process in particular
 - Whatever market-related metrics are established, this will need to be an iterative process, with periodic updating
 - Programs, markets and policy objectives all evolve over time
 - At the same time, markets evolve relatively slowly, suggesting that the MTI framework should too.