



Energy Technologies Area

Lawrence Berkeley National Laboratory

Introduction to Market Transformation Energy Efficiency Programs

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Group (EE SAG)

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Introduction

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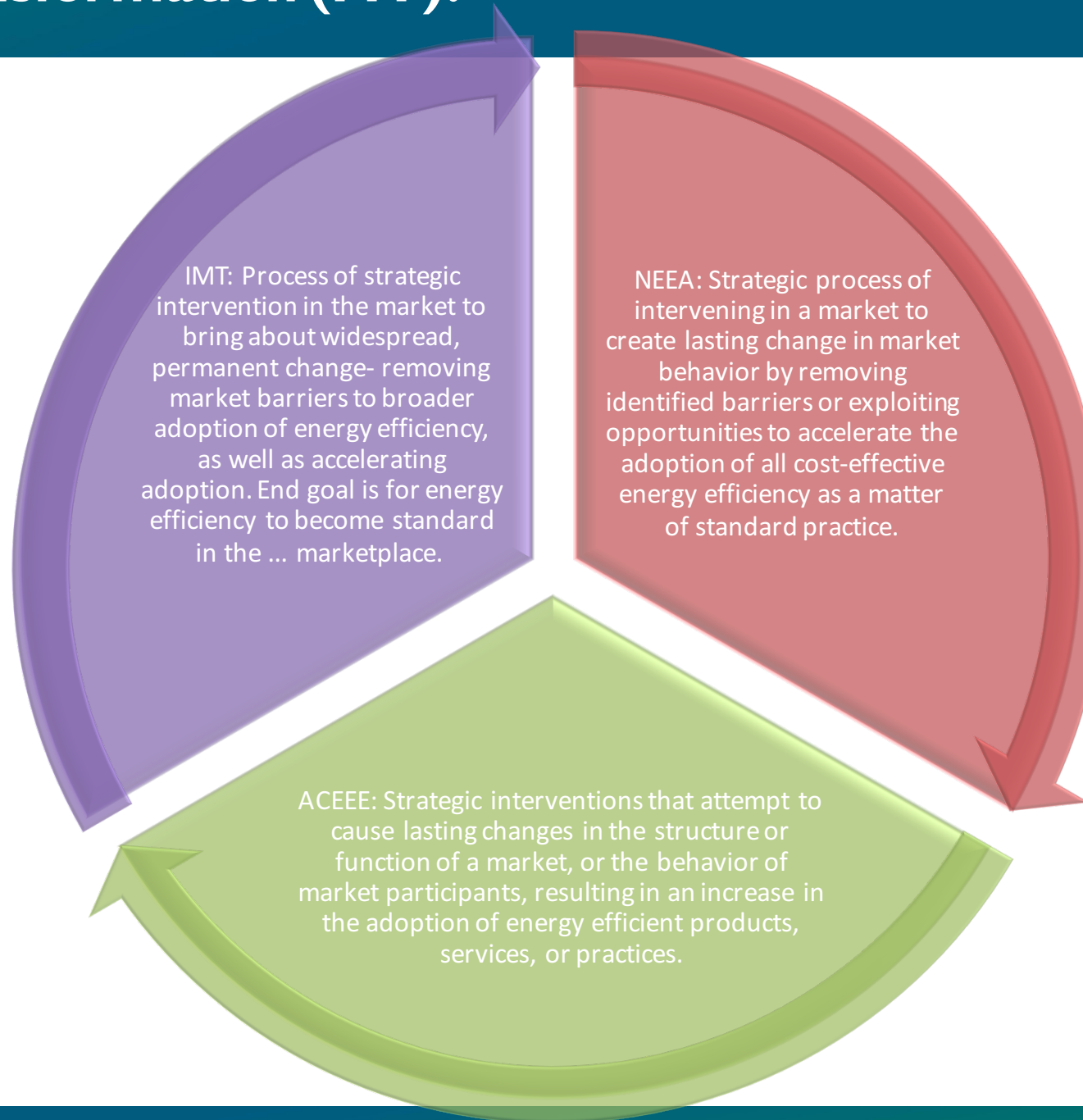
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What is Market Transformation (MT)?

- ◆ Multiple specific definitions, but common themes:
 - ❑ Intervening in market to remove barriers – recognizing markets vary
 - ❑ Strategic with long term objectives but short term tactical metrics
 - ❑ Lasting Change
- ◆ Goal is for efficiency to become standard practice



MT - What and Why

◆ What

- ❑ Products (technologies)
- ❑ Services
- ❑ Practices

◆ Why

- ❑ Thoughtful, focused and integrated method of intervention that leverages market opportunities and focuses on key barriers
- ❑ Expectation of greater savings and more sustainable changes via market changes in products, services and practices
- ❑ Reducing use of public/ratepayer funds in the future
- ❑ Privatization—leveraging the private market

MT - Models and Approaches

◆ Ad-hoc and opportunistic

◆ Systematic

Robust market requires both demand for and supply of goods and services, so:

- ❑ Deliberately identify and evaluate market opportunities, including specific products, services and practices
- ❑ Influence both consumer and business practices - to stimulate demand and the supply of efficient products and services
- ❑ Working through existing market channels with 'others'

Systematic MT Approaches

Begins with a thorough understanding of the target market and MT opportunity:

- ◆ ***Market characterization*** of the current technology, service, or practices involved, including the market barriers that need to be addressed
- ◆ ***Description of the opportunity for advancement and a theory for change*** including ability to capitalize on recent events, strategic intervention points, and collaborating/leveraging the work and resources of others
- ◆ ***Defined objectives with expected MT outcomes and measureable metrics*** that can be used as defining baseline (current) market conditions and evaluating market progress
- ◆ ***Specific MT strategies and tactics*** to be deployed, including the resources required and likely timeframe involved for further market assessment and strategy development, implementation, and evaluation

Market baseline, potential and market effects studies

Selecting Markets for Intervention – Research and Criteria

- ◆ Research and understand the way the market currently functions and the barriers that need to be addressed to move it forward
- ◆ Considerations
 - ❑ Potential energy savings associated with transforming a market.
 - ❑ Market readiness (for change)
 - ❑ Consolidated points of intervention
 - ❑ Potential market impacts (e.g., including number of businesses, number of affected consumers, geographic impact)
 - ❑ Clearly defined MT outcome
 - ❑ Ability to leverage efforts and resources by coordinating with others (local, state, regional and national)

Selecting Markets for Intervention - Scale

- ◆ MT requires significant scale to be effective
- ◆ Generally speaking, energy product (technology) market intervention requires the greatest scale, since these markets are at least regional if not national (or international) in scope
- ◆ Influencing these markets includes being aware of product lifecycles, and usually working upstream with product manufacturers and distributors, and with retailers.
- ◆ Thus, product (technology) MT is best pursued collectively, via collaboration and leveraging across the mid-west, with other regions of the country, with local utility companies, and with the federal government

Selecting Markets for Intervention - Time

- ◆ MT requires significant time, years, to be effective.
- ◆ MT programs need to be sustained, without laps or hiatuses in effort, over multiple years.
Funding stops, such as has recently occurred with DCEO programs, can be very problematic.
- ◆ Within a chosen market it is important to clearly define a long-term MT outcome, with measureable objectives and indicators that signify meaningful progress along the way

Metrics

- ◆ Establish *multiyear goal* for large, systemic change
- ◆ Set *near-term objectives* tied to long-term goal, based on intervention logic and the story
- ◆ Identify and track *market indicators*, examples:
 - Increase in the quality, availability, specification, and installation of LED lamps
 - Increase in the stocking and sales of premium efficiency motors at distribution centers
 - Increase in retail shelf space and improvement in product quality for energy efficient products in retail stores
 - Increase in the specification and installation of high efficiency HVAC systems

Energy Savings

- ◆ Energy savings are a difficult MT topic
- ◆ Energy savings potential is critical to assessing viable market opportunities and deciding where to deploy limited resources
- ◆ Yet, MT outcomes are long-term, and significant energy savings from comprehensive MT strategies and tactics are often a ways off
- ◆ And, when the savings do come, they are hard to attribute to the MT - 'spillover' effects likely come from:
 - Technical and financial incentive programs
 - Upgrading equipment and appliance standards
 - Residential and non-residential building codes
 - Advanced industry standards and practices.
 - Increase in the specification and installation of high efficiency HVAC systems

DCEO's MT Efforts To Date

- ◆ Focused on providing technical assistance and education to support achievement of efficiency goals in all sectors (residential, commercial, industrial)
- ◆ Focused largely on educating energy professionals and energy decision-makers so they have the skills and information needed to implement effective efficiency actions (versus other MT strategies such as technology development or supporting manufacturers, vendors, contractors, retailers, etc.)
- ◆ More geared towards achieving immediate (and to some degree, long-term) energy savings, but not interim market transformation metrics

General Observations About Illinois MT Efforts

Much of the current DCEO MT portfolio is directed towards education and training in the marketplace - a viable MT strategy. However, DCEO and Illinois may be able to benefit from:

- ◆ More deliberately characterizing the markets addressed with *market baseline, potential and market effects* studies about:
 - Specific products (technology)
 - Services, and/or
 - Practices
- ◆ More specific MT strategies and tactics being employed
- ◆ Establishing measureable, non-energy savings metrics and focusing evaluations on MT progress indicators)

General Observations: Technologies, Services and Practices

- ◆ **Products (technology)**. Focus on specific products is probably not that fruitful unless there is an opportunity to collaborate with others to get adequate scale. Effective MT efforts usually focus upstream from the consumer, working to influence product manufacturers and distribution, as well as retailers.
- ◆ **Services**. Services can be fertile ground for independent action, particularly if well coordinated with all relevant market actors in the state. Much of DCEO's current MT portfolio is oriented towards improving market based efficiency services, these programs can perhaps benefit from sharpening the focus.
- ◆ **Practices**. A robust market situation requires both demand for and supply of efficient products and services. Several current DCEO MT programs include advancing efficiency practices such as the BOC program. There are comprehensive approaches to encouraging best practices by business decision-makers that can complement efforts DCEO has underway.



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Thank You

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