
TECHNICAL MEMORANDUM

To: Molly Lunn, Illinois Dept. of Commerce & Economic Opportunity
Office of Energy & Recycling

From: Steven Schiller, Senior Advisor, Lawrence Berkeley National Laboratory (LBNL)¹

Date: March 10, 2016

Subject: Feedback on Illinois Market Transformation Programs

INTRODUCTION

Lawrence Berkeley National Laboratory (LBNL), on behalf of the U.S. DOE's Office of Electricity Delivery & Energy Reliability (OE), is providing objective technical assistance to the Illinois Department of Commerce & Economic Opportunity (DCEO) on its energy efficiency programs. DCEO administers 25% of Illinois' electric and gas ratepayer funds, specifically serving the public and low income sectors and offering market transformation (MT) programs. DCEO is in the process of developing its next three-year portfolio plan. DCEO has asked LBNL for technical assistance concerning developing a more strategic and impactful approach to DCEO's MT efforts, as well as assistance relating to improving the cost effectiveness of its public and low income programs.

This memo is one aspect of LBNL's assistance and addresses DCEO's MT programs. Within the memo we provide an overview of basic MT concepts as they have been applied to energy efficiency efforts in the U.S., a brief summary of current DCEO MT programs with some comments and recommendations, and some over arching MT recommendations with regards to existing and potential programs, both strategic (big picture) and tactical (program specific). The information herein is intended to at least in part answer the following general questions posed by DCEO:

- a. Are there types of market transformation programs that have worked well in other jurisdictions that Illinois is missing, and we should consider?

¹ Substantial input to this memo was provided by Skip Schick, a Portland, Oregon based, energy efficiency and market transformation consultant

LBNL Feedback On Illinois Market Transformation Programs

March 10, 2016

Page 2 of 14

- b. Are there changes to our existing market transformation programs we should consider?
- c. Are there any of our current offerings that we should consider eliminating?

Further assistance with regards to Illinois' MT programs may include support for a MT workshop with Illinois stakeholders in April and feedback and response to questions as DCEO develops its three-year portfolio plan.

STRATEGIC CONSIDERATIONS

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

Overview of MT Concepts

Around the county, market transformation is commonly viewed as reducing or eliminating market barriers to the adoption of energy efficient products, services, and practices. The intent is to transform markets, meaning changes in the market structure or function, so that efficient products, services, and practices are adopted within specific target markets on a sustained, permanent basis. Market transformation is a long-term endeavor even when a specific target market represents a good MT opportunity. That makes it particularly important to be clear in characterizing the market (how it currently works), the barriers to be addressed, strategies and tactics for addressing them, and identifying specific metrics or market indicators along the way that signify meaningful progress.

Market transformation (MT) models and approaches vary from ad-hoc, or opportunistic approaches; to systematic approaches that deliberately identify and evaluate market opportunities, including specific products (technologies), services (such as A&E services, building O&M services), and practices (energy related consumer and business practices) to target. A robust market requires both demand for and supply of goods and services, and the most effective MT strategies look to influence both consumer and business practices (to stimulate demand), and the supply of efficient products and services available in the market to

LBNL Feedback On Illinois Market Transformation Programs

March 10, 2016

Page 3 of 14

meet demand. When applicable, market changes can support advances in building energy codes, appliance and equipment standards, and in industry standards and practices.

This is challenging terrain. Ideally, a deliberate MT approach begins with a thorough understanding of the target market and MT opportunity, including:

- A market characterization of the current technology, service, or practices involved, including the market barriers that need to be addressed to advance the market;
- A detailed description of the opportunity for advancement, 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.

Given the complexity, cost and long-term nature of MT, it is important to be selective about market intervention efforts and clear about expected outcomes. Each sector is made up of numerous markets that can be considered from various perspectives. For example, commercial sector markets can be described by business type (government, commercial real estate, education, healthcare, etc.), by market situation and relevant services (new construction, existing buildings, large vs. small), and by technology or energy end-use (lighting, HVAC, office electronics, etc.). Technologies and services often cut across business types, yet each business type has its own characteristics and decision-making practices. The intersection between these various perspectives, between demand and supply, often represent fertile ground for MT efforts.

MT Models and Approaches

In choosing markets, specific criteria can be used to prioritize market opportunities, and it is important to take the time to research and understand the way the market currently functions and the barriers that need to be addressed to move it forward. An obvious consideration is the potential energy savings associated with transforming a market. Other criteria can include factors such as market readiness (for change), consolidated points of intervention, potential market impacts (e.g., including number of businesses, number of affected consumers, geographic impact), a clearly defined MT outcome, and the ability to leverage efforts and resources by coordinating with others (local, state, regional and national).

LBNL Feedback On Illinois Market Transformation Programs

March 10, 2016

Page 4 of 14

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, and single entities acting on their own are unlikely to have significant market influence or impact. Influencing these markets includes being aware of product lifecycles, and usually working upstream with product manufacturers and distributors, and with retailers. Product (technology) MT is best pursued collectively, via collaboration across the mid-west, with other regions of the country, with local utility companies, and with the federal government. By leveraging limited resources and implementing compatible MT strategies and complementary local utility programs, the ability to significantly influence or impact product markets can dramatically improve.

DCEO appears to be aware of this given its current MT program portfolio. For example, Building Operator Certification (BOC), Illinois Home Performance, and the Codes efforts are approaches that focus more on local trade ally services and capabilities, consumer and business practices, leveraging activity happening in the state and elsewhere around the country. DCEO has taken some steps to align its MT programs with local utility energy efficiency efforts. Utility programs are largely geared towards the acquisition of energy savings as a near-term resource, providing customers with technical assistance and financial incentives. MT can help “prime the pump” for these programs by creating a more robust market place, increasing demand for energy efficiency, and expanding and improving the quality of market based energy efficiency services. However, this can cause an issue with respect to attribution of savings to the MT effort or utility programs, or most likely some combination. Understanding the mutual contribution of each can improve MT and utility program design and implementation.

MT also requires significant time, years, to be effective. Establishing sustainable markets is not something that is accomplished overnight, particularly given consumer’s often ingrained habits, behaviors, and practices impacting efficiency investments and business planning cycles that typically require years to test and establish new product and service lines. Thus, 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. For example, within the commercial new construction market, a long-term MT outcome could be to advance the non-residential building code (adopting what would now be a stretch code). Progress indicators could include, for example, improving compliance with the existing code, and influencing consumer demand for and trade ally (A&Es, construction firms) abilities to

LBNL Feedback On Illinois Market Transformation Programs

March 10, 2016

Page 5 of 14

deliver high performance buildings that are 30% more efficient than current code. Education, training, and assistance could be a primary MT strategy employed, working with codes officials, trade allies, and building asset decision-makers. Local utility programs could provide additional technical assistance and financial incentives for going beyond code; support code development efforts with technical expertise, and provide case studies of successful, cost-effective efficiency efforts that go beyond a current code.

Energy savings are a topic MT oriented organizations struggle with. The 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 likely to be captured through utility technical and financial incentive programs, with market changes often eventually locked in by upgrading equipment and appliance standards, residential and non-residential building codes, or advanced industry standards and practices. Attribution of these energy savings and accounting for spill-over effects are some of the topics that come up in MT impact evaluations.

There are a number of MT oriented organizations with MT approaches and portfolios DCEO can examine to further inform its future MT direction. For example, in its current business cycle the Northwest Energy Efficiency Alliance (NEEA)² is emphasizing four areas; residential consumer products, residential new construction, commercial lighting, and commercial new construction. Within each there are interrelated targets of market focus; including specific products, services, and practices. NEEA and some other organizations around the country with MT oriented efforts are listed in Appendix A to this memo.

DECO MT PORTFOLIO and PROGRAM SPECIFIC CONSIDERATIONS

Market Transformation Portfolio Considerations

In reviewing the overall MT portfolio, it is useful to consider sectors of energy use, market focus (specific energy efficient products, services, practices, or a combination there of), and MT strategies and tactics. Much of the current DCEO MT portfolio is directed towards education and training in the marketplace (with the building industry, trade allies, and consumers). While education and training is certainly a viable MT strategy, DCEO can benefit from more deliberately characterizing the markets addressed, the barriers faced, specific MT strategies and tactics being employed, and expected outcomes (including measureable metrics and

² See NEEA Business Plan 2015-2019 www.neea.org

focusing evaluations on MT progress indicators). This will lead to better distinguishing the market focus for particular programs. Then potential additions, subtractions, or adjustments can be considered, including specific products (technology), services, and/or practices.

Irrespective of the focus on products, services, and/or practices, DCEO can perhaps benefit from a MT planning process that results in specific MT, not just energy savings, goals and interim performance metrics that indicate progress towards both MT and energy savings goals. This would include a formal, stakeholder agreed to definition of MT and program theories/logic models³ that indicate a path for how Illinois moves from current market situations to the transformed markets. Along these paths are, hopefully, measurable metrics such as the number of trade allies and participants involved, type (and features) of service and product offerings, specific changes in consumer practices, advances in trade ally delivery capabilities, and product or service pricing changes. These progress indicators can then be assessed as part of the MT program evaluations, which currently only seem to address energy savings.

In addition, with regards to evaluations, it is important to know your markets. Thus, it may be very worthwhile for DCEO, with perhaps broad utility participation, to establish an evaluation regime that includes market baseline, potential and market effects studies. Appendix B summarizes information on these types of studies and their relationship to MT programs.

Products (technology). As a state entity, a focus on specific products (technology) is probably not that fruitful unless there is an opportunity to collaborate and partner with others to achieve an adequate scale and level of market influence. Product efficiencies have been significantly advanced at the national level in recent years through federal appliance and equipment standards, capturing many market based product specific efficiency advances.

As background, national standards apply to about 60 categories of appliances and equipment sold in the United States.⁴ For products that are not subject to existing national standards,⁵ states may adopt their own product standards for sales within their borders. Within the last

³ Having well-defined program theories helps focus an evaluation objective on assessing the validity of those theories, primarily to see whether a program concept is successful and should be expanded and/or repeated. Theory based evaluation (TBE) is particularly well adapted to evaluating the effectiveness of market transformation initiatives. This is largely because market transformation tends to take a relatively long time to occur, involves a relatively large number of causal steps and mechanisms, and encompasses changing the behavior of multiple categories of market actors—all of which makes it important to focus on specifying and testing a detailed and articulated program theory. From: *State and Local Energy Efficiency Action Network. 2012. Energy Efficiency Program Impact Evaluation Guide*. Prepared by Steven R. Schiller, Schiller Consulting, Inc., www.seeaction.energy.gov.

⁴ For lists of national standards see <http://www.appliance-standards.org/federal> and <http://energy.gov/eere/buildings/appliance-and-equipment-standards-program>

⁵ Federal regulation becomes the law and supersedes any state regulation. Once the federal government establishes an energy-efficiency standard, no state may have a regulation different from the federal standard.

LBNL Feedback On Illinois Market Transformation Programs

March 10, 2016

Page 7 of 14

decade, states have set standards for products such as televisions, battery chargers and vending machines.⁶ Historically, California has taken the lead in setting state standards with several other states following suit. Since 2001, Arizona, Connecticut, Maryland, Massachusetts, New York, Oregon, Rhode Island, and Washington have each passed several rounds of state standards.^{7,8}

Effective MT product oriented efforts usually focus upstream from the consumer, working to influence product manufacturers and distribution, as well as retailers. DCEO could work with MEEA⁹ as a catalyst for advancing certain product efficiencies in the mid-west states, which could be particularly effective if done in concert with other MT oriented efficiency organizations around the country (NEEA, NEEP, California, NYSERDA, etc.), nationally based efforts via organizations such as IMT, Alliance to Save Energy, ACEEE, CEE, and the federal government (DOE, EPA).

Services. Energy efficiency services can be fertile ground for independent action, particularly if well coordinated with all relevant market actors in the state. Improving energy efficiency services offered in the marketplace means working with local contractors and trade allies, as well as trade allies with a larger market footprint (i.e., national) open to locally evolving and improving the services they offer in partnership with regional, state and local organizations. While much of DCEO's current MT portfolio is oriented towards improving market based efficiency services, these programs can benefit from sharpening the focus on the market being addressed, the barriers faced, and the specific strategies and tactics employed to address them (including expected outcomes, measureable objectives and progress indicators). For example, SEDAC supports both energy services companies assessing efficiency project opportunities within existing buildings; and architect and design engineers involved in new building construction. These are very different markets, each meriting individual consideration and attention.

Practices. Practices refer more to the demand for energy efficiency products and services. As previously noted, a robust market situation requires both demand for and supply of efficient products and services. Several current DCEO MT programs include advancing efficiency practices on the part of consumers, such as the SEDAC work with institutional (public) clients and the BOC, which works with building operators to improve their energy related building operating practices. There are comprehensive approaches to encouraging best practices by

⁶ Appliance Standards Awareness Project: <http://www.appliance-standards.org/states#states-table>.

⁷ <http://www.appliance-standards.org/standard-basics-DOE-state-legislature-product-requirements>

⁸ For list of state standards see <http://www.appliance-standards.org/states>

⁹ As just an example, MEEA has suggested an upstream program on notched v-belts

LBNL Feedback On Illinois Market Transformation Programs

March 10, 2016

Page 8 of 14

business decision-makers that can complement efforts DCEO has underway. For example, strategic energy management (SEM) looks to advance a wide range of energy related business practices, including building operating practices, facility upgrades, purchasing and procurement, new construction practices and occupant behavior. Comprehensive advances in energy related business practices lead to greater demand of efficient products and services, including better internal understanding and support for investing in training such as BOC.

Current DCEO Market Transformation Programs

In reviewing the current DECO MT portfolio it is useful to consider the energy use sectors addressed, the markets targeted, and the potential interrelationships with other DCEO programs and the energy efficiency programs and efforts of others.

Building Industry Training and Education (BITE)	All Sectors
DCEO Trade Ally Program	All Sectors
Illinois Codes Collaborative Program	Residential & Commercial Sectors
Codes Education and Technical Assistance	Residential & Commercial Sectors
Illinois Home Performance	Residential Sector
Lights for Learning Program	Residential Sector
Smart Energy Design Assistance Center Program (SEDAC)	Commercial Sector
Energy Performance Contracting Technical Assistance	Commercial Sector
Building Operator Certification (BOC)	Commercial Sector

All Sectors – Programs include Building Industry Training and Education (BITE) and the Trade Ally Program.

Building Industry Training and Education (BITE) – BITE solicits for and provides capacity building, training and education for various professionals from all sectors of the building industry in efficient products and practices. Several BITE funded training efforts have become ongoing programs, including BOC, Codes training, and Home Performance. BITE now also seeks entities to provide project implementation assistance.

Recommendation: Characterize how the building industry currently operates in the specific markets being addressed, identify the market barriers education and training can address (gaps in building industry and trade ally knowledge and skills), the strategies and tactics being deployed, and the outcomes expected (including measureable metrics). Consider further focusing BITE to better channel its impact in addressing specific markets and particular market barriers in driving efficiency in general and towards utility programs.

DCEO Trade Ally Program – A trade ally network that has grown to well over 300 trade allies. DCEO hosts two trade ally rallies, vendor workshops and multiple webinars and luncheons throughout each program year.

LBNL Feedback On Illinois Market Transformation Programs

March 10, 2016

Page 9 of 14

Recommendation: Align the trade ally program with strategies and tactics being deployed to address specific market barriers identified through BITE.

Residential & Commercial Sectors – Programs include the Codes Collaborative and Codes Education and Technical Assistance.

Illinois Codes Collaborative/Education & Technical Assistance – Residential and commercial codes training and technical assistance provided in partnership with the Illinois utilities to improve compliance with energy codes. The program includes training to improve compliance, an initial analysis to establish a compliance baseline, and annual measurement of the rate of compliance.

Recommendation: Advancing code compliance, with metrics based on compliance rates being put in place, represents a solid MT concept. There may be an opportunity to include additional metrics for specific target audiences focused on advancing their knowledge and abilities related to improving compliance with the energy codes. As code compliance improves, the focus could shift to include education and assistance in exceeding existing codes.

Residential Sector – Programs include Illinois Home Performance and Lights for Learning.

Illinois Home Performance – Illinois Home Performance (with Energy Star), delivered through the Midwest Energy Efficiency Alliance (MEEA), works with qualified contractors to take a “whole home” approach to energy upgrades. Illinois Home Performance is somewhat different from the nationwide Energy Star approach is that it places emphasis on setting standards for contractor services (across the state), and on education and training in the marketplace.

Recommendation – Continue to place greater emphasis on consistency in standards and on education and training for contractors and others active in the marketplace (realtors, appraisers, etc.). Look for ways to further complement home weatherization and residential energy efficiency services provided through utilities and others.

Lights for Learning – An education based outreach and fundraising program promoting the sale and use of low-cost, energy efficient CFLs. The Program helps children and schools raise needed funds while encouraging participants and their communities to become more energy conscious.

Recommendation – Consider discontinuing this effort as a market transformation program. While Lights for Learning appears to be a valuable ongoing effort, it is not market transformation. It does not work through or look to directly influence residential lighting upstream manufacturing or retail market distribution channels.

Commercial Sector – Programs include The SEDAC Program, including Energy Performance Contracting Technical Assistance, and the BOC Program.

LBNL Feedback On Illinois Market Transformation Programs

March 10, 2016

Page 10 of 14

Smart Energy Design Assistance Center Program (SEDAC) – Delivered through the University of Illinois School of Architecture, assistance is provided to commercial and institutional clients considering energy efficiency at existing or new facilities. Delivery includes general outreach, a range of project design assistance services, and implementation support. It can also include assistance with performance contracting.

Recommendation - Clearly characterize the markets served, barriers faced, and how the services offered address those barriers. From a MT perspective, this is likely to drive services offered more towards supporting delivery of market based trade ally services, and educating clients on how to get best value from these services. It could also lead to a more focused effort based on specific market outcomes and objectives. For example, the School of Architecture could provide specific design assistance to architects and engineers looking to use integrated design practices to construct buildings 30% more efficient than state code. With regards to performance contracting, Illinois may wish to reemphasize these programs and utilize energy services companies (ESCOs) as a resource, including financing resource, for public facilities.

Building Operators Certification Program (BOC) – BOC is a training program that provides building operators with tips and tools to maximize efficiency and reduce energy use through no-to-low cost operations and maintenance strategies. The program is delivered in a traditional classroom format and includes eight full-day courses taught by industry experts.

Recommendation – Specific outcomes and performance metrics could be established and used to determine ongoing market progress.

Appendix A: Some Organizations with an MT Focus (outside the mid-west)

Alliance to Save Energy www.ase.org

American Council for an Energy Efficient Economy www.aceee.org

California Energy Commission www.energy.ca.gov

Consortium for Energy Efficiency www.cee.org

Institute for Market Transformation www.imt.org

New York State Energy Research & Development Agency www.nyserda.ny.gov

Northeast Energy Efficiency Partnerships www.neep.org

Northwest Energy Efficiency Alliance www.neea.org

U. S. Department of Energy www.energy.gov

Environmental Protection Agency www.epa.gov (including Energy Star www.energystar.gov)

Appendix B: Market Studies¹⁰

Market transformation program-induced changes that affect program non-participants or the way a market operates are addressed in market effects evaluations. The ultimate goal of market effects evaluations is to estimate the energy savings that result from program-induced changes in the market, but initially market effects evaluations assess the degree to which program interventions are having their intended influence in the market. The goal of market effects evaluations is to characterize and quantify the effects of a market transformation program on market actors (e.g., product and service suppliers) and consumers, regardless of whether they participated in any specific programs. Other market studies include potential studies and market baseline studies.

Market effects evaluations often involve a significant undertaking, since they are designed to determine whether the market is changing. Market effects are sometimes called the ultimate test of a program's success, answering the question: "Will efficiency (best) practices continue in the marketplace, even after the current program ends?" The difference between a market change and a market effect is attribution, the ability to trace back a change in the market to a specific program or group of programs. A definition of market effects from a well-referenced 1996 study is:¹¹

Market Effect - a change in the structure of a market or the behavior of market participants that is reflective of an increase in the adoption of energy-efficient products, services, or practices and is causally related to market intervention(s) (e.g., programs). Examples of market effects include increased levels of awareness of energy-efficient technologies among customers and suppliers, increased availability of efficient technologies through retail channels, reduced prices for efficient models, build-out of efficient model lines, and – the end-goal – increased market share for efficient goods, services, and design practices.

Examples of what a market effects evaluation might analyze are:

- Are the entities that undertook efficiency projects undertaking additional projects or incorporating additional technologies in their facilities that were not directly induced by the program? This might indicate that facility operators have become convinced of the value of, for example, high-efficiency motors, and are installing them on their own.
- Are entities that did not undertake projects now adopting concepts and technologies

¹⁰ Major portions of this appendix are excerpted from Appendix B of the *State and Local Energy Efficiency Action Network. 2012. Energy Efficiency Program Impact Evaluation Guide*. Prepared by Steven R. Schiller, Schiller Consulting, Inc., www.seeaction.energy.gov.

¹¹ "A Scoping Study on Energy-Efficiency Market Transformation by California Utility DSM Programs", Joseph Eto, Ralph Prael, and Jeff Schegel, Lawrence Berkeley National Laboratory. 1996.

that were encouraged by the program? This might indicate that the program convinced other facility operators of the advantages of the efficiency concepts.

- Are manufacturers, distributors, retailers, vendors, and others involved in the supply chain of efficiency products (and services) changing their product offerings, how they are marketing them, how they are pricing them, stocking them, etc.? The answers can indicate how the supply chain is adapting to changes in supply of and demand for efficiency products.

Structuring a market effects evaluation entails consideration of several levels or stages, with the ultimate goal generally understood to be the increased adoption of energy-efficiency goods and services in the general market leading to energy savings. Beginning with this ultimate, higher-level goal of energy savings, the following list suggests a hierarchy of pre-cursors to that goal.

1. *Energy savings.* This is the ultimate goal of energy efficiency programs seeking to cause market effects.
2. *Increased adoption/sales of energy-efficient goods or services in the market.* Increases in energy-efficient goods and services can be translated into energy savings.
3. *Establishment of codes and standards(C&S).* C&S indicate acceptance and now requirements for certain efficiency actions or use of certain measures.
4. *(Broad) Market effects.* Market effects are changes observed in the market as a whole in factors that contribute to increased adoption or sales. Examples would be increased awareness or understanding, changes in decision-making practices, or reductions in risk perception, as reflected in market-level studies. The factor for which the change is tracked can be termed a *market indicator*.
5. *Participant effects.* Participant effects and indicators are similar to market effects and indicators, but are observed only for end users or suppliers who have had direct involvement with the programs. Thus, “participant effects” are limited to effects beyond those already tracked and credited as part of a resource acquisition program (i.e., short-term spillover)

In general, the achievement of goals at each of the higher levels of the hierarchy requires accomplishments at the lower levels. As a result, tracking goals at each stage not only provides feedback on performance with respect to that goal itself, but also provides evidence that effects at the next higher levels can be attributed to the program.

Goals will typically be set and tracked for different time frames and for different purposes. While energy savings are the ultimate market effects goal, in most cases savings cannot be

LBNL Feedback On Illinois Market Transformation Programs

March 10, 2016

Page 14 of 14

measured meaningfully for several years, and even then will usually not have the same level of accuracy as impact evaluations of direct resource acquisition savings. To credit measure adoption and associated savings to a program, we need to be able to show that the increased energy efficiency adoption, the longer-term market effects, and the participant effects have all occurred pretty much in the manner and in the order specified by the program theory. For most programs, it takes a number of years to reach this point.

The market effects evaluation can easily overlap with the spillover analyses conducted as part of an impact evaluation. Market effects studies, however, tend to be focused on long-term, sustained effects, versus a typically assessed, more short-term spillover perspective.

Nonetheless, from a long-term resource and program impact perspective, it can be accurately said that without considering market effects, an impact evaluation is incomplete.