

**New Means for New Ends:
Adopting Evaluation Strategies
For a New Generation of Market Transformation Programs¹**

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ABSTRACT

This paper examines market transformation evaluation, and the special considerations that play a role in assessing today's more comprehensive, holistic, and integrated program offerings. The **New York Energy SmartSM** Small Commercial Lighting program is one such offering which provides incentives at multiple points in the decision chain to promote the installation of effective, energy efficient lighting systems. This program is used as an illustrative example in a discussion on the development of measurement protocol. This discussion covers understanding market conditions and market effects, evaluating program strategies and complex incentive structures, and determining the overall effectiveness of a systems-oriented approach rather than the typical product-oriented approach. Early results and lessons learned from conducting the small commercial lighting baseline and market assessment study are provided. This paper also offers suggestions on conveying program expectations and early results to the policy community and other decision makers.

Introduction

In recent years, market transformation programs have become increasingly sophisticated and holistic. Whereas earlier market transformation programs relied on a rather narrow focus and strategy, the newer programs are becoming more expansive and multifaceted. After approximately ten years of offering market transformation in the energy efficiency area, implementing organizations have gained a great deal of experience and knowledge. Many states and regions have already put the basic programs in place, and are now tackling the more complex markets which present even more difficult barriers. This evolution of market transformation programs presents an interesting challenge for evaluators in that it necessitates creative thinking and measurement approaches to capture the more subtle effects of individual program elements and the synergistic effects that can occur among program elements. It also requires evaluators and program managers to communicate the unique nature of these programs, in terms of both impacts and timing, to the policy community in an effective way. The **New York Energy SmartSM** Small Commercial Lighting program, administered by the New York State Energy Research and Development Authority (NYSERDA), is one example of the newer market transformation programs that are being developed. This paper uses the Small Commercial Lighting program to illustrate the key considerations and approaches for evaluating and reporting on the market transformation programs of the future.

¹ The views expressed in this paper are those of the authors and do not necessarily reflect the views of the New York State Energy Research and Development Authority or policy makers in New York.

Early Approach to Market Transformation Programs

Many organizations that administer market transformation initiatives, including NYSERDA, began by offering very focused and targeted programs. These early programs attempted to encourage market adoption of a particular product or service and tended to use more narrowly targeted incentive strategies. For example, the **New York Energy SmartSM** Premium Efficiency Motors program, one of the earlier market transformation programs offered by NYSERDA, focuses on Consortium for Energy Efficiency (CEE)-qualified premium efficiency motors and provides incentives to motor vendors to promote increased sales and adoption. Programs like this can usually employ the standard practice of collecting baseline and follow-up market data, along with monitoring the expenditure of incentive payments and program outcomes to assess their effectiveness. In most cases where the product is easily identifiable and the intervention strategy is more focused and limited, standard market transformation evaluation methodology will usually suffice.

Key Attributes of Newer Market Transformation Programs

The main attributes of these newer market transformation programs include increased comprehensiveness of program focus and strategy, a system-oriented approach, and enhanced portfolio-level integration among programs. Each of these attributes present an interesting challenge for the evaluation community as discussed in the following text.

Increased Comprehensiveness of Program Focus and Strategy

As implementing organizations gain experience with market transformation programs, these programs are evolving to become more multifaceted in their approach. Many of the new programs being offered focus on multiple market actors and vary their strategies depending on the barriers that exist for that particular market actor. For instance, the **New York Energy SmartSM** Small Commercial Lighting program, funded through New York's public benefit program, is designed to influence the practices of electrical contractors, lighting distributors, suppliers, retailers and commercial end-users in lighting projects for spaces roughly 10,000 square feet and less. Changing the practices of these market actors, is expected to result in measurable improvements in availability, promotion and implementation of effective, energy-efficient lighting technologies and designs. The Small Commercial Lighting program strategy consists of various combinations of incentives, promotional assistance, and training to contractors, distributors and end-users. The complexity that comes with this focus on multiple market influencers, along with the more widespread and varied incentive strategy, presents the first challenge for program evaluators.

Holistic, Systems-Oriented Approach

Many of these newer market transformation programs employ a more holistic approach to developing markets. Instead of focusing on increasing adoption of one measure or a specific type of measures, they look at the larger market in an attempt to make their services even more valuable to the customer. For instance, the Small Commercial Lighting program aims to change lighting design and decisions by focusing on improving the entire lighting system. Lighting is defined as "effective" and "energy-efficient" not by the fixtures that are specified, but rather, how the system is designed and installed to meet user needs in a specific application. NYSERDA's newer residential building performance initiatives employ similar systems-oriented strategies. Instead of providing incentives only for the installation of specific measures

such as energy efficient furnaces, air conditioners, or windows, they offer whole-house diagnostics that can reveal how the building is functioning as a unit and where coordinated improvements to the building envelope and its internal workings will yield optimal energy savings. By incorporating a systems approach, the customer is better served. In cases like this, the typical sales and market share measurements that evaluators have relied on in the past will fail to tell the complete story. This presents the second challenge for evaluators.

Enhanced Portfolio-Level Integration

Not only do these newer market transformation programs employ multiple strategies within their own budgets, but they are also linking more effectively with other complimentary programs to offer a higher level of service to more of the key market actors. For instance, the Small Commercial Lighting program will rely heavily on the **New York Energy SmartSM** New Construction program in order to provide end user incentives to more of the commercial establishments that are brought into the program by participating contractors. As implementing organizations build their portfolios, they can become more sophisticated in their offerings to customers, and develop hybrid approaches across programs to meet specific needs. By providing various layers of services along the market chain of adoption, these programs are more likely to achieve the desired market impacts but this may make measurement more difficult.² This presents the third challenge for evaluators.

Developing Measurement Protocol

Given the challenges presented above, the following section presents some considerations for developing measurement protocol to: (1) characterize and monitor the market, (2) monitor the effects of a complex incentive structure, and (3) determine the overall effectiveness of the systems-based approach.

Market Conditions and Market Effects

Understanding market conditions and market effects is often the first step to evaluating market transformation programs. The accepted methodology for summative or impact evaluation of market transformation programs includes baseline research, estimation of near-term market effects, and estimation of the ultimate long term market effects.³ This key step can require added effort when dealing with newer market transformation programs. The breadth of market influence is typically more significant for these types of programs due to their targeting of multiple market actors and products. The expanded focus on several market actors and decision points can mean not only more indicators to track, but also more thought into how these indicators impact one another. When dealing with multiple market actors, there is generally increased opportunity for crossover effects, meaning that movement or lack thereof on certain key indicators for one market actor could have a significant impact on the level of movement seen for other market actors as well. Consideration of these crossover impacts might prove helpful in developing program indicators.

² DeCotis, Paul A., Mark C. Coleman, Jennifer Ellefsen, Helen Kim. 2000. "Portfolio Approach to Designing and Evaluating Buildings Energy Efficiency Programs." *Proceedings from the 2000 AESP 11th National Energy Services Conference*. Association of Energy Service Professionals. Boca Raton, Florida.

³ Sebold, Frederick D., Alan Fields, Lisa Skumatz, Shel Feldman, Miriam Goldberg, Ken Keating, and Jane Peters. 2001. *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. Chapter 6, Methods for Evaluating Market Effects. Pacific Gas and Electric Co.

The shift from a product focus to systems focus means that the common indicators, including market share, price and shelf space of products, are considerably less meaningful unless they are used in combination with other important indicators. The success of these newer market transformation programs depends on higher-level, more complex changes in overall practices. For a typical product-oriented market transformation program, evaluators could look at change in shelf space of a certain product as a key practice among vendors. This practice is relatively easy to measure and quantify. However, in systems-oriented market transformation programs, the practices that are being influenced are not as distinct and measurable. Often times, evaluators will need to look not for a change in the level of an existing practice (*i.e.*, stocking of a certain type of measure), but for the adoption of a completely new mode of operation (*i.e.*, use of a combination of efficiency and quality guidelines in specifying lighting jobs).

Measurement of practices is inherently more difficult than measurement of sales. When a specific product is being promoted, evaluators can use secondary data or common industry sources, like shipment data, to verify the changes they are seeing. The systems focus of these newer market transformation programs forces evaluators to rely more heavily on their own primary research, such as surveys and interviews with participants and non-participants, to assess changes in the market.

The systems approach, also presents a challenge in terms of developing an understanding among market actors. This requires that evaluators and program managers develop clear definitions of the system they are trying to get the market to adopt. It is much easier for a customer to say whether they purchased a CEE-qualified motor than it is for them to comprehend what researchers mean by effective, energy efficient lighting. Evaluators need a well thought out definition that can be tested repeatedly through market characterization and follow-up research.

The development of definitions can become a research effort in and of itself, sometimes requiring focus groups or telephone interviews of key market actors to get at different connotations of the words being used. For example, initial research for the Small Commercial Lighting program was an invaluable step in evolving the program buzzword from “high-quality energy-efficient lighting” to “effective energy-efficient lighting.” When asked their initial impression of the early definition, about 30% of end users said that the term made this type of lighting system sound expensive. Another 11% of the end users said the term made this type of lighting system sound cheap or inexpensive. These results raised a red flag for program designers, who came to the conclusion that “high-quality” is an overused term that should not be associated with the concept they were trying to promote. The end user responses bring to light an interesting dichotomy which generally indicates confusion with the term. Regardless of how you look at it, the initial impression of significant added expense or “cheapness” could be a major barrier to adoption. Therefore, the term was changed prior to program implementation. The final term and definition are provided in Exhibit 1.

Even with clear definitions, the complexity of the systems focus is also likely to increase the amount of time required to transform or develop the market. Adoption can be expected to come more quickly for basic products than for entirely new systems or approaches. This reinforces the importance of having strong interim indicators and measurement plans in place.

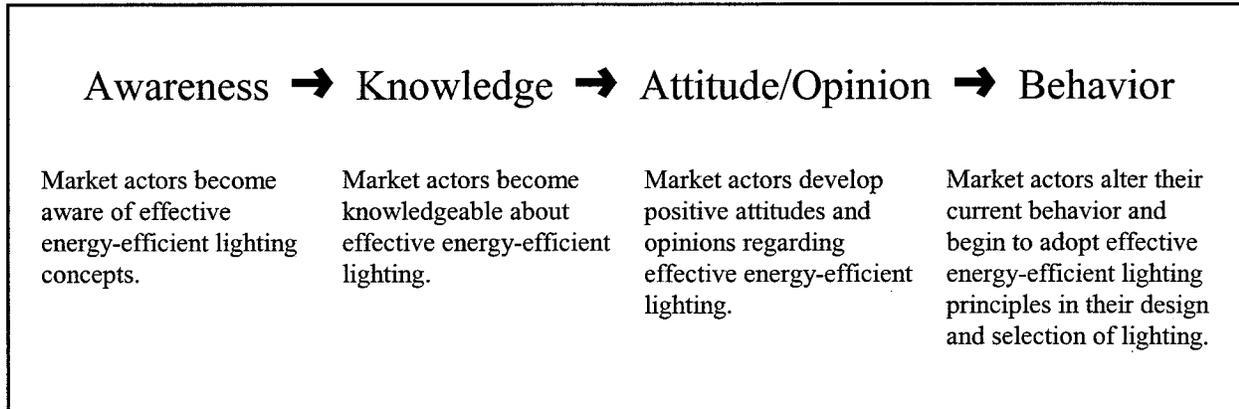
A market adoption model, largely adapted from the literature on diffusion of innovations, was incorporated into the development of indicators and evaluation techniques for the Small Commercial

Exhibit 1. Small Commercial Lighting Program Definition of Effective Energy Efficient Lighting

“Lighting systems that are optimally designed to meet specific application and energy efficiency needs. The systems are easy to use, aesthetically pleasing, and enhance the visual capability of people using the space”

Lighting program.⁴ Customers will ultimately change their buying habits through incremental changes along the continuum presented in Exhibit 2.

Exhibit 2. Market Adoption Model



The indicators selected for the Small Commercial Lighting program will help to assess incremental changes in the market. They will help determine whether market actors are getting the word about the program benefits (awareness), whether they understand the benefits of effective energy efficient lighting (knowledge), whether they buy into it (attitude and opinion), and then ultimately whether they will purchase and install appropriate lighting (behavior). Buyers go through each step in the buyer behavior process before making any purchase, and it is recognized that the length of time elapsed between awareness and behavior varies by to market actor. The buyer behavior model guided development of a list of market indicators which, through time-series monitoring, will help determine program success. Exhibit 3 provides a list of both quantitative and qualitative market indicators by market actor.

The indicators presented in Exhibit 3 were initially tested in the baseline and market characterization study. They will be re-tested at the program’s mid-point and once again at program end in order to assess the extend of change in the market and the need for further intervention.

Program Strategy: Evaluating a Complex Incentive Structure

Formative or process evaluation is another key element in assessing market transformation programs in general.⁵ This part of the evaluation can provide feedback to program managers on how their different interventions are working, and may ultimately be used to refine program strategy or logic. Intervention strategies for market transformation programs can include a mix of incentives, training, education, and advertising or outreach. The complexity of formative evaluation increases as the number and mix of interventions increases.

Many of the newer market transformation programs that are being offered, including the Small Commercial Lighting program, take an alternative approach to the traditional incentive/rebate paradigm. Providing a mix of incentives in the form of education, design tools and support, competitions, and sales

⁴ Rogers, Everett M. 1995. *Diffusion of Innovations*. Fourth Edition. The Free Press. New York, NY.

⁵ Sebald, Frederick D., Alan Fields, Lisa Skumatz, Shel Feldman, Miriam Goldberg, Ken Keating, and Jane Peters. 2001. *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. Chapter 6, Methods for Evaluating Market Effects. Pacific Gas and Electric Co.

Exhibit 3. Small Commercial Lighting Program Market Indicators

	Manufacturer	Electrical Contractor	Retailer Supplier	Designer Consultant Architect	End User
Quantitative Indicators					
Awareness and knowledge	X	X	X	X	X
% of products that are energy efficient	X		X		
% of jobs where a recommendation is made regarding lighting layout		X		X	
% of jobs where high quality energy efficient lighting is promoted/offered		X			
% of jobs recommended with a design lighting element				X	
% of customers that consider high quality energy efficient lighting concepts when making lighting decisions					X
% of jobs completed with a high quality energy efficient component		X			
% of jobs completed with a design lighting element				X	
% of facility lighting that currently meets high quality energy efficient standards					X
Familiarity with and use of Lighting Research Center guidelines/tools		X		X	X
Decision criteria used for making lighting purchases					X
Qualitative Indicators					
Attitude toward/acceptance of high quality energy efficient lighting concepts	X	X	X	X	X
Relative concerns regarding current facility lighting					X
Marketing of high quality energy efficient options	X		X	X	
Marketing messages found most compelling					X
Contractor/retailer inquiries about high quality energy efficient lighting	X				
Customer inquiries about high quality energy efficient lighting			X		
How lighting information is received					X
Decision making role in lighting design layout	X	X	X	X	X
Use of guidelines and tools previously developed					X

aids to influential mid-stream players is a logical, albeit non-traditional approach to spending incentive dollars. The diversity of this new incentive approach means that there will be overlapping influences for each key market actor and decision point. There is also increased opportunity for synergies to develop within the program itself where one market actor might be depending upon the other to make a project happen and receive their incentive payment. Some of these overlapping influences and synergies are described below for the Small Commercial Lighting program. As noted earlier, these newer market transformation programs are also improving their integration with other programs and leveraging additional interventions and funding sources for their constituents where there is a need. Examining the effectiveness of these relationships between multiple programs is also important.

Exhibit 4 provides a summary of the incentive strategies that the Small Commercial Lighting program offers to participants. The different incentives presented are actually quite interrelated and cause the various allies to work together toward a common end. For example, the Ally Distributor Installation Competition relies on Ally Contractors submitting qualified projects with equipment invoices originating from Ally Distributors. This gives Ally Distributors a reason to encourage the contractors they work with to submit their project documentation. In another case involving the Design Competition, Ally Distributors will need to team with Ally Contractors to submit entries because the design needs to be implemented and qualified through the Program. In this case the award will be split between contractor and distributor. Lastly, project incentives are targeted to Ally Contractors. However, it is recognized that some Ally Contractors may not be willing or able, at least initially, to complete the project application. Some Ally Contractors may not have the knowledge, early on, to meet the application's technical requirements. Therefore, the Program will train Ally Distributors and manufacturer representatives to help the Ally Contractors complete the application and worksheet. Where this occurs, the incentive will be split between the contractor and the individual assisting with the application. This accomplishes two goals: (1) the project is qualified and documented, and (2) the contractor has a strong incentive (and the means) to become proficient at understanding lighting equipment technical data.

With the complex multiple ally structure of the Small Commercial Lighting program, and the cooperative relationships that it promotes, simply tracking the expenditure of incentive budgets will not provide complete information. It is important to capture, both initially and throughout the program time frame, how the various incentives are being shared among the allies. Changes in the sharing of incentives could indicate market progress in certain areas. For example, as Ally Contractors become more proficient in effective energy-efficient lighting concepts and requirements, they should be able to complete the project application requirements on their own rather quickly and easily. If this occurs, program managers will observe a decrease over time in the percentage of project incentives that the contractors have to split with Ally Distributors for assisting with project applications. Building this type of indicator into the program incentive structure can help in making the linkage between program interventions and observed changes.

In addition to the incentives listed in Exhibit 4, the Small Commercial Lighting program will also leverage the **New York Energy SmartSM** New Construction program prescriptive incentives available to participating end-users wherever possible. These commercial lighting incentives through the New Construction program are specified for discrete types of equipment (*e.g.*, ballasts, fixtures, occupancy sensors, etc.) which could be part of an effective energy efficient lighting design. Ally Contractors will market these incentives to their customers as a value-added service and to gain a competitive advantage by rolling the incentive into the project cost thereby reducing the final cost to the customer. Other **New York Energy SmartSM** incentive budgets that can be accessed by Small Commercial Lighting program participants are the Standard Performance Contract program, and the **New York Energy SmartSM** Loan Fund. The combined effects of how these various program offerings work in concert will be examined. In fact, NYSERDA has recently undertaken an effort with Oak Ridge National Laboratory, one of it's

evaluation assistance contractors, to examine the portfolio-level effects of the **New York Energy SmartSM** programs.

The Small Commercial Lighting program will conduct a six month evaluation that will focus on participation levels and quantity of projects completed and in-progress. Low participation rates among contractors (Allies) and lower than anticipated project applications will trigger reevaluation of the project incentive structure. However, when the incentives offered are as diverse as they are for this program (combining project incentives with contests, training, and promotion) it is also important to look beyond simple project production numbers. For instance, Ally Contractors may see the most value in the qualification training and cooperative advertising. They may join the program simply for the recognition and opportunity to have their name associated with this effort, and not for the \$500 per project incentive. Therefore, the incentive offering will also be evaluated as a whole by looking at what parts of the package the Ally Contractors are utilizing and why. Because incentives are so interrelated, a lack of expenditures in one area will not necessarily mean that that offering should be eliminated.

With the multiple ally structure of the program and the incentives, the upstream allies can be an important vehicle to relay to program management any feedback or problems that they encounter through their daily contact with mid-stream allies. Program account managers will keep their finger on the pulse of incentive issues by requesting feedback from Ally Distributors during frequent visits. Through daily conversations with

Exhibit 4. Small Commercial Lighting Program Comprehensive Incentive Strategy

Incentive Descriptions

1. Ally Contractor Incentive: NYSERDA will provide \$500 to qualified Ally Contractors who complete the Program's qualification training and eligible lighting projects. This incentive is offered to primarily cover the administrative cost of completing the project application. The incentive will be shared with Ally Distributors if they help the contractor to complete the necessary documentation.
2. Multi-Site (Charter Partner) Incentive: Upon recruitment, businesses or organizations with 10 or more sites can receive up to \$2,000 for lighting design assistance and/or review. After design concepts have been accepted, participants will receive an incentive of \$1,000 for signing a Letter of Intent to adopt the lighting design and Program principles. Charter Partners are then eligible to receive \$500 for each building (up to 10 sites) completed according to the agreed upon design.
3. Ally Distributor Incentive: Ally Distributors will be offered \$500 to host Small Commercial Lighting program qualification training seminars. Most large proactive lighting suppliers or distributors interact daily with the targeted contractors, providing a strategic avenue to promote the training.
4. National Council on Qualifications for the Lighting Professions (NCQLP) Certification Incentive: NCQLP certification will be publicized through the Program as a powerful credential to identify designers and contractors qualified to design and install effective, energy-efficient lighting. Allies who complete the exam will receive \$200 toward the examination fee.
5. End-user (Single Site): Small businesses occupying single sites or up to ten facilities will receive a "Promo Package" worth \$50 (consisting of a plaque and glass sticker identifying them as program participants, and a press release for self-promotion) for having qualifying lighting designs installed at their facilities.
6. Cooperative Advertising: Ally Distributors, Ally Contractors, and Charter Partners who wish to place advertisements incorporating aspects of their participation in the Small Commercial Lighting program will be eligible for these coop funds. The program will pay no more than an equal portion of the ad cost depending on how many other sponsors are contributing.
7. Design and Installation Competitions: NYSERDA has set aside \$78,000 for awards to program participants for having the best lighting designs and the highest number of projects.

their contractor customers, Ally Distributor staff will be able to relay problems with the incentive structure to their account managers. This information will in turn be conveyed to the Program Team for consideration and action.

Determining the Overall Effectiveness of the Systems Approach

Evaluating the overall benefits resulting from the installation of an effective, energy-efficient lighting system is a complex undertaking. Whereas the energy related benefits are easily identified and evaluated as noted in Exhibit 5, the non-energy benefits that are more challenging to quantify may in fact be the most important benefits to the end user. To help evaluate the success of this approach to improving overall lighting systems, a set of lighting quality metrics was developed. These metrics will actually guide the team in identifying, recommending, and evaluating effective, energy-efficient lighting jobs.

The Small Commercial Lighting program lighting quality metrics consider not only the total connected load of the lighting system that is to be installed, but also assesses such important parameters as: Color Rendering Index (CRI), Horizontal Mean Illuminance, and Illuminance Uniformity. A complete list of the metrics and a brief description of what each is measuring is provided in Exhibit 6. By applying these metrics as qualifiers to a program project, the effectiveness of the project will markedly increase. The program team developed an online project information worksheet that guides participating contractors and distributors through the compliance process of these metrics for each of their projects. The completed worksheet along with a project application, fixture specification sheets and equipment invoices will be submitted to qualify the project for a financial incentive. Data listed on the submitted documents will be entered into the program tracking system for administrative and evaluation reporting.

The lighting quality metrics developed for the Small Commercial Lighting program will be helpful in determining the benefits of the improved lighting system on a technical level. Translating the benefit of these technical improvements to the end use customer is of the utmost importance. The Small Commercial Lighting program aims to make facility managers, who play a role in lighting selection, more aware of these concepts. However it is also recognized that the electrical contractors and lighting designers are the true experts in this area. It is expected that these market

Exhibit 5. Small Commercial Lighting Program Measurement of Energy Savings

Measuring the actual energy savings derived through the replacement of less energy-efficient lighting systems with more thoughtful and efficient designs, will be relatively straightforward. This program will use the ASHRAE/IESNA 90.1-1989 lighting power allowances as a baseline. In order for a project to qualify, its installed wattage per square foot (watts/SF) must be lower than the ASHRAE/IESNA 90.1-1999 standard by at least 10%. A simple calculation of the connected load divided by the space area, subtracted from the baseline for that particular space will produce a watt/SF savings. Applying the space area and hours of operation will net a kilowatt and kilowatt-hour savings.

Exhibit 6. Small Commercial Lighting Program Lighting Quality Metrics

1. Horizontal Mean Illuminance
Light levels on workplane.
2. Color Rendering Index (CRI)
Whether colors appear true.
3. Luminous Intensity
Glare.
4. Energy Use
Ensures that energy use is 10% lower than ASHRAE 90.1-1999.
5. Vertical Illuminance
Even light levels throughout the space.
6. Illuminance Uniformity
Proper fixture spacing.

actors will use the lighting quality metrics as a distinguishing feature of their lighting systems. Just as a homeowner can know they are selecting an energy efficient refrigerator when they choose ENERGY STAR[®], a commercial facility manager can know they are getting effective energy-efficient lighting if it meets the Small Commercial Lighting program's technical requirements.

Beyond the technical requirements, the impact of the new lighting on the building occupants is equally important when evaluating the effectiveness of the lighting system. Office workers don't have to understand the technical metrics to know how they feel within the space and how that affects their ability to perform their job. The occupant's perceived level of comfort within the space, both pre- and post-installation, could also be evaluated through site visits and participant surveys or interviews.

Presentation of Evaluation Results to Date

The initial baseline and market assessment, conducted by program subcontractor Opinion Dynamics Corporation (ODC), consisted of three focus groups (two customer and one electrical contractor), 60 in-depth interviews (with manufacturers, electrical contractors, lighting suppliers and retailers, architects, designers, and corporate chain store customers) and more than 200 quantitative telephone surveys (with contractors and end users). Key results are included below for customers and electrical contractors.

Customers

- Three out of 10 customers were familiar with the term "high quality energy efficient lighting."
- Once high quality energy efficient lighting was defined for them, 27% of customers said they would consider replacing their current lighting with high quality energy efficient lighting even though their existing lighting is satisfactory.
- When asked whether they agreed that high quality energy efficient lighting could reduce maintenance costs, 84% of office respondents and 71% of retail respondents agreed.
- When asked who they worked with when installing lighting, 66% of customers identified electrical contractors and 21% identified architects.
- When asked who was most influential in making their lighting decisions, 61% of customers identified themselves as most influential and 15% identified the electrical contractor.
- When asked who they would go to for information on high quality energy efficient lighting, 68% of customers identified electrical contractors as the likely source.
- Only 5% of respondents were familiar with the Lighting Research Center or any of its publications. This speaks to familiarity with existing tools.

The results from the customer research verified the program logic by indicating that electrical contractors are an influential group.

Electrical Contractors

- About 80% of electrical contractors claimed to be familiar with the term "high quality energy efficient lighting" prior to being given the definition of that term.
- Although electrical contractors were familiar with the term high quality energy efficient lighting, only 19% actually recommended it to small commercial customers all the time. Contractors seem to be aware of high quality energy efficient lighting, but that awareness has not translated into influencing attitudes and opinions enough to alter behavior. Program implementation staff are using

this information to help develop training materials that influence contractors to alter their behavior toward recommending and installing more high quality energy efficient jobs.

- When asked how often they provide certain services to their customers, 40% of electrical contractors responded that they often specify equipment, nearly 30% of the contractors often determined lighting layout, and nearly 25% often provided conceptual designs.
- When asked who they were likely to work with, 50% of electrical contractors said they worked with an architect, 44% said they worked with general contractors, and 35% worked with facility managers.

As noted earlier, these key indicators will be tracked over time with studies by ODC at the program's mid point and at the close of the program. These indicators, along with quarterly metrics reporting, are expected to provide a full picture of the program's impact on the marketplace.

Policy Implications & Conclusions

Two additional challenges that are shared by the evaluation and program implementation community are: (1) increasing understanding, among the policy community, that these newer market transformation programs require additional time up-front to design a sound strategy, and (2) increasing recognition, among policy makers, that results from newer market transformation programs (and many of the earlier programs as well) will look different, and will have different timing than those of resource acquisition or demand side management programs.

It is clear that these newer market transformation programs are significantly more complex than their earlier counterparts. Careful thought and consideration will be key to developing sound program logics and initial measurement of market conditions. The evaluation and program implementation community can work together to convey this to policy makers so that the developers of newer market transformation programs are afforded the opportunity to establish the most effective approaches.

Evaluators and program managers have already made great strides in encouraging policy makers to recognize that both the level and timing of market transformation results are different than what can be expected from traditional demand side management or resource acquisition programs. The policy community is beginning to acknowledge, on a more widespread basis, that the primary motivation of market transformation is not to deliver immediate energy savings, but rather to shepherd changes in behavior that result in sustained reductions in energy use. Given the more ambitious mission of market transformation, the policy community is also coming to realize that these programs take time to show measurable results. As evaluators and program implementors for this newer of market transformation programs, we are in a position to further develop this understanding. Our data collection and reporting should balance policy makers' need for immediate information with the longer term nature of market transformation programs.

This paper has presented some key considerations that NYSERDA has come across in its design, implementation and evaluation of newer, more sophisticated market transformation programs, including Small Commercial Lighting. It is hoped that these considerations and lessons might benefit evaluators and program managers as they also become increasingly involved in the more complex programs of the future. A novel intervention strategy is really only as good as our ability to measure it, and the authors of this paper hope that sharing their experience with spur further thinking in this area.