

A New Evaluation Paradigm for a New Generation of Energy Efficiency Programs

Bill Saxonis,¹New York State Department of Public Service, Albany, NY

ABSTRACT

In 2008, New York embarked on one of the most ambitious energy efficiency programs in the nation, the Energy Efficiency Portfolio Standard (EEPS), with an objective of reducing electricity usage by 15% from the level forecasted for 2015. In approving the EEPS, the New York Public Service Commission (Commission) stressed the importance of program evaluation and took several significant actions, including increasing funding for evaluation and calling for the establishment of a statewide evaluation advisory group to enhance New York's evaluation of a new generation of programs being introduced in 2009 and beyond. To make rigorous and reliable program evaluations a cornerstone of the EEPS effort requires new thinking and new approaches. This paper provides the roadmap of New York's journey to a new evaluation paradigm. In many cases, the elements are evolving, but how we address the challenges and our "lessons learned" will prove insightful to evaluators, regulators, and policy makers, especially from organizations initiating or expanding their energy efficiency program portfolios.

Introduction

In recent years, energy efficiency programs in the United States have demonstrated the characteristics of a growth industry. The number of states making significant commitments to energy programs has increased, with nation-wide investments in these programs having more than doubled since 2000. In 2008, ratepayer-funded expenditures for energy efficiency programs totaled over \$3.7 billion, up 18 percent from 2007 (CEE). Funding is expected to grow significantly in the years ahead, as the federal government approaches energy efficiency and environmental initiatives with renewed enthusiasm. The U.S. Department of Energy has made it a high priority to evaluate the effectiveness of billions of dollars directed to energy efficiency and renewable energy projects in the recently passed American Recovery and Reinvestment Act (ARRA) of 2009, commonly called the Federal Economic Stimulus Program.

For the evaluation community, these positive developments are accompanied by a call to enhance the reliability and credibility of evaluation results to meet the needs of regulators, policy makers, and the public. Funding for evaluation is increasing, as is scrutiny of evaluation techniques, policies, and results. One immediate challenge is to isolate and report energy savings from a particular program or funding source when consumers will likely be confronted with competing energy efficiency messages and programs sponsored by federal, state, and local governments, utilities, and even retailers (e.g., Wal-Mart's environmental sustainability program²). These developments will occur after residents in several states, including major population centers such as New York and California, have already been exposed to billions of dollars in energy efficiency programs over several decades. Therefore, it will be difficult, but often necessary, to determine whether any change in energy behavior is the result of a federal government program, a CFL discount coupon from the local supermarket, or a lasting impact

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² For example, Wal-Mart has set a goal that by 2010 all air conditioners that they sell will be Energy Star certified. See: <http://walmartstores.com/Sustainability>

from a program of five years ago. This paper does not propose to address every foreseeable challenge, but rather to focus on building the foundation for better evaluation and making resources available to answer critical questions.

New York's ambitious EEPS builds upon its leadership position in energy efficiency established over the last three decades. New York's energy efficiency community is working diligently to develop a new paradigm to provide the foundation to evaluate a new generation of EEPS energy efficiency programs. To more fully understand the needs of this paradigm, it is important to understand the factors underpinning the need for change.

Background

Moving Toward an Energy Efficiency Portfolio Standard in New York State

In the mid-1980s, the Commission ordered the major electric utilities to design limited-scale energy efficiency programs; in the early nineties, the Commission instituted a comprehensive program for electricity demand-side management and integrated resource planning. In 1992 and 1993, annual spending on utility-sponsored energy programs was nearly \$300 million. The programs generally emphasized energy efficiency and frequently employed financial incentives (e.g., customer rebates) targeted directly at electricity consumers. At the time, although most of the State enjoyed ample electric generation capacity, demand management was considered an important component of the resource planning necessary to reduce the long-term need for new generation. For a variety of reasons, including the need to justify incentive payments to the utilities, the Commission required the utilities to provide detailed evaluation plans and studies documenting program effectiveness and impacts.

In the mid-nineties, reflecting a national trend, utility spending on energy program in New York declined to under \$100 million. By 1998, utility funding vanished to a large degree when the Commission established the System Benefits Charge Fund (SBC), financed through an assessment on electricity customer bills. This policy change was influenced by New York's initiatives to a) restructure the electric and gas utility industry to allow residential and business customers to purchase energy from marketers and b) encourage market transformation of energy-efficient products by focusing on statewide programs administered by the New York State Energy Research and Development Authority (NYSERDA) rather than individual utilities targeting their own customers. Between 1998-2008, NYSERDA SBC programs have funded about one billion dollars in energy initiatives, with annual energy saving estimated at 3,220 GWh in 2008 (NYSERDA, 2009).

The next big policy change occurred in May 2007 when the Commission initiated a proceeding to design an electric and natural gas Energy Efficiency Portfolio Standard (EEPS) with the objective of reducing electricity usage by 15% from the level forecasted for 2015 (Case 07-M-0548, May 2007). The energy savings goal for natural gas is yet to be determined. By 2015, New York's electricity usage was projected to top 183,000 GWh annually, nearly 13% higher than current levels. By achieving the EEPS goal, electricity usage in 2015 would be below the 2006 consumption level. The Commission undertook this aggressive effort as a cornerstone of state energy policy, and especially to respond to factors such as rising energy demand, volatile fuel prices, uncertain downstate electricity supply, and the need to reduce greenhouse gas emissions. The Commission concluded that the most effective method to address these concerns was to promote increased energy conservation and efficiency.

The Commission also made clear that rigorous program evaluation must be an integral part of the EEPS and specifically required "transparent and technically sound methods for measurement and verification of net energy savings, benefits and costs, as well as assessment of customer satisfaction and program efficacy." The importance of program evaluation earned a mention in the press release announcing the EEPS proceeding and was a frequent topic at the Commission's open sessions. While

evaluation has always been an important part of New York's energy programs, it had not received this level of attention in recent years.

Implementing a program as ambitious as the EEPS presented significant challenges, prompting the Administrative Law Judge in the Proceeding to establish four working groups to address high-priority issues critical to meeting the Commission's EEPS goals. Working group membership included the Department of Public Service Staff (Staff), representatives of New York's electric and gas utilities, the New York Independent System Operator, environmental groups, consumer organizations, NYSERDA, and business interests.

Working Group III was established to deal specifically with evaluation, measurement, and verification issues. Working Group III quickly posed a series of questions:

- How do we deal with diverse evaluation issues, for diverse programs, implemented in a diverse state?
- Should we establish statewide evaluation protocols?
- How do we enforce the standards?
- How do we effectively and accurately quantify the impacts attributable to EEPS programs?
- Do we need a statewide evaluation group to help guide the process over the short and long term?
- How do we balance evaluation costs with the need for data reliability?
- What is a reasonable reporting protocol that balances the goal of transparency and accuracy without being overly burdensome to program administrators?

Answering these questions was challenging. Over a period of several months, Working Group III held eleven meetings, including two plenary meetings with the other working groups and stakeholders. While the working group struggled to reach consensus on some issues, there were several areas of strong agreement, including the conclusion that rigorous evaluation "is critical to the success of the EEPS as a whole." To promote rigorous evaluation, Working Group III recommended that there be:

- A comprehensive evaluation plan for every EEPS program.
- Increased evaluation funding of up to five percent of total EEPS funding.
- Transparent and timely reporting.
- An evaluation task force to play a key role in establishing statewide evaluation protocols and, in some cases, in coordinating research of statewide interest. While there was a lack of complete agreement on some details related to functions, authority, and membership, there was agreement that the task force was necessary "to ensure that all program administrators are evaluating programs and reporting results consistently, reliably and regularly."

A detailed discussion of these issues is documented in Working Group III's final report that was presented at a public meeting in New York City and formally released in December 2007. The achievements from this effort proved important because they laid the foundation of the evaluation policy that would follow in 2008 and beyond as the EEPS programs unfold (Working Group III Final Report, 2007).

EEPS Becomes Reality

In June 2008, the Commission formally approved the EEPS and by doing so embraced the goal of reducing statewide electricity usage in 2015 to a level below 2006 consumption. Total investment in

energy efficiency by organizations under Commission jurisdiction is expected to exceed \$500 million annually, an increase of approximately 185 percent over the 2007 funding level. The Commission appreciated NYSERDA's significant contributions to energy efficiency in New York while at the same time recognized that there were many advantages of including the investor-owned utilities as EEPS program administrators. These advantages include aligning utility financial interests with utility resource planning, benefiting from the direct utility relationship with its customers, and providing the option of on-bill financing. As a result, the Commission endorsed a hybrid model to include EEPS programs offered by NYSERDA, utilities, and possibly other administrators.

The Commission continued to maintain its strong commitment to rigorous, accurate, timely, and transparent program evaluation. It made clear, however, that the call for more robust evaluation was not intended as a criticism of previous evaluation efforts, but as a recognition of the need for a new paradigm for tracking progress toward EEPS goals, protecting ratepayer interests, facilitating planning/forecasting, and documenting the use of energy efficiency to help defer transmission and distribution upgrades. The Commission took several steps to enhance evaluation that closely paralleled the recommendations of Working Group III, including:

- Increased evaluation budgets from two to five percent of the overall program budgets.
- Called for the creation of the statewide Evaluation Advisory Group (EAG) to advise the Commission and Staff on key evaluation issues and develop detailed evaluation and reporting guidelines for all program administrators.
- Required detailed evaluation plans with all program proposals.
- Mandated a more active role for Commission Staff in overseeing and guiding evaluation and reporting activities.
- Required monthly, quarterly, and annual reporting.

In August 2008, the Commission established a program to provide the investor-owned utilities with financial incentives for successful implementation of EEPS programs. The Commission noted that properly designed incentives offer several advantages including encouraging administrative efficiencies, promoting better program performance, and motivating utilities to pursue efficiency programs as a resource option. The Commission recognized that New York utilities had not administered major energy efficiency programs in recent years, making it difficult to accurately establish performance goals, and decided that "our incentive policy will begin at modest levels." The maximum incentive that could be awarded for achieving 1, 029,521 MWhs would be \$40 million (Case 07-M-0548, August 2008).

The Road to a New Paradigm

The evaluation objectives spelled out by the Commission appeared straightforward, and there was generally broad support with the exception of some program administrators voicing concerns that the monthly reporting process would be too burdensome. Transforming the Commission's objectives into a viable action plan resulted in a series of challenges. Critical factors included:

- **An Increased Oversight Role:** the number of program administrators would jump from primarily one (NYSERDA) to about 10. The amount of review and oversight responsibility for Staff would need to increase significantly.
- **Lack of Recent Utility Experience:** The utility program administrators had not been responsible for a large portfolio of energy efficiency programs in New York State for about 15 years. Their energy efficiency departments were, in most cases, disbanded.

- **Established procedures for some:** NYSERDA, for example, has been administering and evaluating programs since 1998; its experience with a process developed over many years might make change more difficult.
- **Need for Cooperation:** Some contributors to the EEPS are outside of Commission jurisdiction such as the New York Power Authority (NYPA) and the Long Island Power Authority (LIPA).
- **Tight Deadlines:** The Commission ordered both the creation of the EAG and statewide evaluation and reporting guidelines within 45 days of the approval of the EEPS Order on June 23, 2008.
- **Major Increase in Funding:** Evaluation funding as a percentage of the program budget jumped significantly (about a 150% increase), as did expectations for more accurate data.

The Commission envisioned that the EAG would not only serve as a key advisor to Staff but also play an important role in encouraging communication and cooperation by creating a forum that allows program administrators, Staff, and other interested parties to discuss concerns, share ideas, and propose solutions to problems. Simply stated: effective communication is critical. The EAG was also viewed as a critical means to encourage participation from organizations active in energy efficiency programs but not under the Commission's jurisdiction. The most notable examples are NYPA, a major provider to large customers and municipalities, and LIPA, which serves over one million electric customers on Long Island. Moreover, the New York Independent System Operator (NYISO), also a member of the EAG, is not an EEPS program administrator, but has shown an increasing interest in evaluation as the impact of energy efficiency is projected to grow and to be a significant factor in accurately forecasting future electric demand.

In addition to evaluation methodologies, the process for administering the evaluations is also important. Who will conduct the evaluations? Will they be able to encourage confidence and provide transparency? The administrative process recommended by Working Group III is essentially the process that will be followed under EEPS. The Working Group reasoned:

“Program evaluation efforts should be fully integrated with program design and implementation so that data and information on participants, non-participants, impacts, market effects and other relevant metrics are collected regularly and cost-effectively...each program administrator would be responsible for the day- to-day management and conduct of evaluation activities for their programs using competitively selected third-party contractors.” (Working Group III Final Report, 2007)

Some wondered whether having program administrators direct the evaluations would be an optimal approach to encourage independence and transparency. The option of having an independent body, such as the Staff, assume the management of all the evaluation efforts associated with programs administered by the utilities under Commission jurisdiction and by NYSERDA was also considered. This concept has merit, but from a process perspective, there were serious concerns. If New York went in this direction, it would have been difficult to acquire the necessary additional resources during the current hiring freeze and state budget crisis.

Establish and Support the EAG

The lack of an independent evaluation administrator and a need for independence and transparency of the evaluation process made the formation of an effective EAG even more critical. The EAG's integral role placed a responsibility on the Staff to ensure that the group developed as an

effective, balanced, and committed organization. The Staff issued a call for volunteers to all the parties in the EEPS case outlining the criteria for membership along with a list of possible activities and responsibilities. The Staff emphasized that EAG members would need to make the necessary commitment of time and resources and that “effective contributors should have (at a minimum) a basic knowledge of evaluation data management and energy efficiency programs.” Moreover, candidates were required to disclose whether they were under contract to program administrators to implement all or part of an EEPS program or if they would likely seek such arrangements in the future. After the Staff carefully reviewed the candidates, the EAG was established with representatives of about 20 organizations with decades of energy efficiency program experience and several nationally recognized energy program evaluation experts among them.

Despite the wealth of experience possessed by EAG members, evaluation is a complex subject requiring knowledge from numerous disciplines, including statistics, engineering, economics, and research methods (e.g., questionnaire design) and requires that significant time be dedicated to analysis. Because evaluation is as much an art as it is a science, evaluators must often make judgment calls from a menu of viable options. A common failing that we observed with other advisory groups was that they frequently lack the resources to analyze complex issues effectively. For example, an issue currently under review is an evaluation plan for a low-income energy efficiency program. The program contemplates a telephone survey of non-program participants combined with a billing analysis of the pre and post energy consumption of the program participants. We are currently pondering if there is an adequate alternative to using a comparison group and whether the additional cost of a comparison group is justified. Effectively answering these questions requires a high level of technical expertise and knowledge of low-income program evaluation in particular. If the wrong choice is made, evaluation rigor could be seriously and legitimately questioned.

One of the Staff’s major goals was to determine how it could engage the support necessary for the EAG to analyze effectively the crucial technical details that could spell success or failure of an evaluation. In addition, the Staff believed it was important for the EAG to have access to the latest evaluation data from other states and even from around the world. Based on our experience, most state level working groups naturally tend to focus on their own state or region. The level of activity in the world of evaluation that could inform evaluation in New York is impressive. It could help us save time and money by avoiding the mistakes of others and provide insights into the best available research methods. Unfortunately, the sheer volume of evaluation data makes it difficult for regulatory and utility staff to find the time to analyze these often voluminous reports. States like California, New York, and Massachusetts release thousands of pages of evaluation reports in a typical year. For example, the Staff is reviewing an expensive and complex plan to evaluate a residential compact florescent light (CFL) program. The Staff was aware of numerous residential CFL studies being conducted and recognized that a detailed understanding of these evaluation designs and results would prove invaluable. The challenge is to find the time and resources to assess these efforts adequately.

A solution to increasing the effectiveness of the Staff and the EAG was to engage an independent evaluation contractor to serve in an advisory and research capacity. The Staff and the EAG will not hesitate to ask evaluation contractors working for program administrators probing question about their work, but this is not the same as receiving independent third-party feedback. In addition, we sought an evaluation firm or team with experience in multiple states and multiple program types to provide additional breadth to our analysis. However, obtaining an independent contractor was not without its challenges.

Through the open competitive bid process, a Request for Qualifications (RFQ) was issued to select a contractor to help the Staff and the EAG fulfill their directive to develop and maintain evaluation protocols and to advise on critical reporting and evaluation issues (RFQ). The RFQ listed 15 specific responsibilities likely to be assigned to the contractor including participation in EAG meetings,

developing data collection requirements, and reviewing evaluation plans and reports. A major challenge to the potential contractors was to assemble a team that could respond to the varied demands of the assignments and address potential conflict of interests. The latter proved to be the more challenging endeavor. The RFQ stated, “In order to avoid any real or perceived conflict of interest, consultants and firms that are currently performing program evaluation and program implementation work for NYSERDA, New York State utilities, and other potential New York program administrators, within and outside of New York, will not be selected unless they can demonstrate that such work does not present a conflict of interest.” The RFQ further states, “Once selected, the contractor may not perform program evaluation and program implementation work for NYSERDA, New York utilities, or any other program administrator for the duration of the contract.” These restrictions likely proved an insurmountable obstacle to some potential candidates. However, it was critical to the integrity of the EAG to incorporate strong conflict of interest provisions. It would be untenable to have a contractor performing evaluations for a New York utility while at the same time recommending evaluation approaches and reviewing its own work as an advisor to the EAG. While some contractors may be able to maintain separation within their organization, the perception would be negative.

The Role of the EAG

A. Establish Evaluation Protocols

The EAG’s first major assignment was to establish evaluation protocols to guide evaluation plans and bring uniformity to evaluation practices and reporting. The evaluation plans will be enhanced if their development is guided by a single set of statewide evaluation protocols applicable to all program administrators (including voluntary agreement from entities that may not be subject to Commission jurisdiction). Establishing common terminology and methodologies enables the statewide sharing and analysis of results and accurate tracking of statewide progress toward EEPS’s energy saving goals.

The primary objective of the protocols is to establish acceptable minimum standards for all programs rather than mandate a “one size fits all” approach. The protocols do not represent a rigid doctrine but offer flexibility to allow the objectives of quality evaluation to be met using the most reliable, responsive, and cost-effective approaches. Care was taken to avoid requirements that are unduly burdensome or that add unneeded costs to program efforts.

On the other hand, the protocols **do** inject specific expectations and standards into the process. For example, the goal for estimating gross energy savings at the program level was set at the 90/10-confidence/precision. At this level, one can be 90 percent confident that the measured value (e.g., the energy reduction resulting from a program) is within +/- 10 percent of the reported value based on sampling techniques. Of course, this assumes that there are no problems such as non-response bias or deficiencies in the survey design. Expectations for a quality evaluation plan were also spelled out in the evaluation guidelines and included a request for a discussion of threats to statistical validity. Key elements of an evaluation plan required evaluators to address process and impact evaluation, net to gross analysis, program reporting, and data needs (Department of Public Service, Evaluation Guidance, 2008).

B. Review Evaluation Plans

The EEPS has spurred many new initiatives and evaluation plans are critical elements of the program implementation process. The most efficient approach to effective evaluation planning is to consider program evaluation needs in the program design process. Developing an initial evaluation plan in preparation for launching a program allows program evaluators to work with program planners to identify data collection needs, establish budget estimates, and synchronize evaluation goals with

program performance goals. For the Commission and ratepayers, it documents a serious commitment to rigorous and transparent evaluation. The evaluation plans will vary depending on the size, scope, and type of programs, but all evaluation plans will be guided by the protocols and EEPS goals of providing reliable, timely, and transparent results.

EAG and the Staff review of these plans offers several advantages. This process not only provides a method for the review of each plan on its own merits, but also offers a venue for the reviewers to see evaluations plans as part of the big picture. Looking at the plans as a group can help identify best practices and compare costs and priorities. For example, one plan recommends spending over 20 percent of program budget (about \$3.5 million) to evaluate a residential CFL program. This is permissible because while the portfolio evaluation budget is set at 5 percent of the portfolio budget, program administrators can spend more or less than this amount depending on the needs of a particular program. In isolation, the CFL program evaluation plan appears reasonable, but with one program consuming such a large percentage of the total budget, the result will be less funding for other programs in the portfolio and a likely corresponding sacrifice in evaluation rigor. Moreover, other program administrators may be planning similar research that could overlap.

An initial round of evaluation plans was submitted for the Staff and EAG review. This process allowed program administrators to review each other's plans as well as to hear how they were assessed by Staff, the independent advisory contractor, and other interested parties. The group developed a rating form for each program plan based on several critical issues, including the strength of the impact and process evaluation proposals, evaluation design cost effectiveness, evaluation administration, and the degree of separation between evaluation and program implementation staff. On a scale from 1-100, the scores varied widely ranging from 4 to 78, with most scores around 55.

This process helped to pinpoint plan differences, highlight strengths and weakness, and serve as a forum for ideas. Considering that all the program administrators were represented on the EAG, they could see how their plans compared to those of others and have a source of ideas for improvement. Generally the plans were considered to be respectful of the evaluation guidelines, but were often lacking in critical details.

C. Guide the Development of a Data Collection Process

To inform the decision-making process properly, evaluation results must not only be accurate and timely, but also comparable in order to facilitate analysis over the full spectrum of EEPS programs. For example, in 1993, the New York Power Pool retained independent consultants to develop a standard reporting format for evaluation reports for energy efficiency programs operated by the New York State utilities. The consultants found that "PSC staff, as well as a number of utility staff, expressed frustration in trying to compare the results of similar programs among the utilities. The data was inconsistent in completeness, format, and definition" (Barakat & Chamberlin). It is impossible to track progress toward the EEPS goals effectively if the results that are reported are based on methods and analytical conventions that are inconsistent and incompatible.

Simply reaching agreement on terms and definitions is not sufficient; it is critical to collect the right data at the right time to support the evaluation and reporting process. We know from conversations with NYSERDA's evaluation contractors that one of the most serious obstacles to their efforts in the early years of evaluating the NYSERDA program portfolio was coping with multiple program databases populated with data that were not always complete or consistent. NYSERDA's primary goal at that time was to put the new program portfolio in place quickly; careful planning of the data base management system became a casualty. This problem frustrated the evaluators and resulted in additional costs and delays in producing the evaluation reports. A lesson learned was to define correctly the most essential

data elements to be collected before program implementation commences, because it is almost always more costly, and sometimes impossible, to collect the neglected data later.

The EAG made data issues a top priority particularly since it was dealing with many new programs and multiple program administrators, including some that were not under the Commission's jurisdiction (e.g., LIPA, NYPA). The Staff and its evaluation consultant developed and submitted to the EAG for its review a data template designed to achieve two key objectives.

The first objective was to provide an Excel spreadsheet to support monthly program reporting, management, and oversight. The focus was on basic information such as program costs and projected energy impacts. This type of data can also serve as an "early warning" for programs that are deviating from their goals. The second objective was to establish a list of data elements that are commonly needed for evaluation activities and program oversight activities such as the exact type and date of measure installation. This data may not need to be regularly reported, but should be routinely collected.

Anticipating that data collection would be challenging, the EAG established a subcommittee to work through the complexity of implementing an effective data collection process when dealing with varied programs and multiple administrators. The full complexity of this activity was made clear when program administrators commented on the draft data collection templates. Examples of the comments/questions included:

- Does "peak kW" mean customer peak, utility peak, system peaks?
- When is a project application considered fulfilled?
- How will adjustments and corrections be addressed?
- It may be difficult to identify repeat participants
- We don't track by building type.
- How do we reflect benefits from Research and Development programs?

A longer range objective is to create a centralized reporting data base system to help the Staff monitor program progress and make key data, including evaluation reports, readily available to the public via the internet.

D. Coordinate Statewide Activities

Another major function of the EAG is to identify research projects issues that might be undertaken more cost effectively on a statewide or regional basis (e.g., measure life, baseline studies). It may not make financial sense, for example, for individual utilities serving upstate New York to each perform their own baseline study. Not only might these studies cost more, but the final products may not be as rigorous as they could be if utilities pool their resources and pursue a single study with a coordinated approach.

The EAG created a subcommittee to develop a priority list of the most viable studies to be conducted on a statewide or regional basis. Initial recommendations included baseline studies, free rider/spillover measurement approaches, and common survey questions. Another subcommittee is dealing with administrative matters including how costs may be allocated among utilities for statewide/regional studies, how contracts will be managed, and how disputes over the direction and outcomes of the studies will be resolved.

In addition, the Commission recently decided to participate in the regional Evaluation, Measurement and Verification Forum (EM&V Forum) being sponsored by the Northeast Energy Efficiency Partnership (NEEP). The EM&V Forum's objective is to facilitate the development of common EM&V protocols to estimate, track, and report the impacts of energy efficiency and demand-side resources and environmental benefits. Key objectives include increasing the reliability, uniformity,

and quality of this data while reducing research costs by pooling resources contributed by EM&V Forum participants. In short, the objectives of the EM&V Forum are essentially similar to the EAG objectives for its statewide incentives, except the EM&V Forum currently encompasses eleven states and this number could increase in the future. NEEP is proposing several regional projects in which New York could participate, including a load shape study and measure life study targeting commercial lighting. After consulting with the EAG, the final decision on project selection will fall to the director of the DPS Office of Energy Efficiency and the Environment (Case 05-M-0090, March 2009).

E. Coordinate Possible Modifications to the Technical Manual

While the evaluation planning process outlined above offers numerous benefits, it does take time to implement, which for some states considering making changes to their evaluation approach may be in short supply. To some degree, that was true in New York. In the first round of program proposals, we found that the assumptions for program savings varied widely and we knew that impact evaluations were not likely to be completed for at least a year or two. The solution is to implement a standardized approach to estimating measure saving using ex-ante (deemed) data.

In January 2009, the Commission approved the *New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs* (Technical Manual), to provide a uniform measure-specific approach for estimating energy and demand savings associated with the first wave of EEPS programs. The approach provided immediate and consistent methods for estimating energy savings impacts and will also facilitate initial estimates of utility lost revenue recovery and incentive payments.

The Technical Manual's approaches and formulas are based primarily on engineering factors, evaluation results from similar programs, and general experience. The Technical Manual is not a substitute for results from the rigorous program evaluation, but it does provide immediate and consistent methods for estimating energy saving impacts until more program-specific data become available through the evaluation process.

Not surprisingly, there were differing opinions on the reliability of the approaches and assumptions in the Technical Manual and the Commission invited parties to propose refinements. To facilitate this process, the EAG established a subcommittee to consider updates to the Technical Manual, including results from program specific evaluations, and to provide recommendations to the full EAG for additional consideration. The EAG will prepare formal recommendations to advise the director of the DPS Office of Electricity and Environment of the changes it considers necessary. The Staff will issue a detailed list of potential changes for public comment and ultimately Commission action.

Conclusions

Rather than focus on specific evaluation techniques, this paper focused on the building of a foundation for effective evaluation efforts for New York's most ambitious energy efficiency program, the EEPS. It is clear that evaluation is more than a collection of formulas, statistics, and modeling; it contains a heavy dose of the human dynamic and judgment, interpretation, and communication. It also involves the careful execution of skills related to planning, policy, and collaboration. Even the most elegant algorithm will disappoint if program administrators fail to plan properly to collect the required data. The effectiveness of good planning would certainly be undermined without "buy in" from policy makers. The technical dynamics and the human dynamics must synchronize. The simple lesson is to plan, anticipate needs, communicate, and effectively execute shared goals and objectives. Teddy Roosevelt once said that "the most important single ingredient in the formula of success is knowing how to get along with people."

We see the EAG as a critical component in the success of our evaluation effort. So far the level of cooperation with EAG has been encouraging and progress has been steady. There is no guarantee that as the decisions become more complex and the financial risks rise, we could experience some turbulence, but we are approaching the future with confidence that we are building a solid foundation to meet the Commission objectives of rigorous and transparent evaluation results.

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