STATE OF NEW YORK

DEPARTMENT OF PUBLIC SERVICE

CASE 07-M-0548 — Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard

ENERGY EFFICIENCY PORTFOLIO STANDARD
PROGRAM REVIEW WHITE PAPER

Prepared by Department of Public Service Staff:

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Note: Please see a four-page memorandum describing updates attached to the end of this document.

July 6, 2011

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EXECUTIVE SUMMARY

The orders authorizing EEPS programs and surcharges provide authority through the end of 2011. This White Paper reviews the program to date, and discusses a number of issues to be considered for the improvement of the EEPS programs.

The paper reviews the current status of EEPS, measured against the expectations established in the Commission's initial orders from 2008 and 2009. Many components of the program are in transition, however, so that a comprehensive three-year review is of limited use. After an extended period of proposals, approvals, and roll-out, many programs have only recently reached the point where they are fully operational. Some programs have been significantly altered since their inception, and their past results do not reflect current expectations. Also, our process for estimating savings and targets has recently been revised, making it difficult in many cases to provide a "snapshot" review of how savings compare to targets.

Taken as a whole, the review indicates that programs are now in place with a reasonable expectation of meeting the Commission's goals. Staff's recommendation is to reauthorize the majority of the EEPS programs and to maintain surcharges at current levels, through 2015, subject to continuous reevaluation and improvement. Staff also recommends that the utility shareholder incentive program should be terminated following 2011, subject to a reassessment prior to the end of 2012.

Review of Results

As of February 28, 2011, program administrators report electric efficiency measures that are reducing annual usage by over one million megawatt-hours, or the annual needs of nearly 160,000 homes. Gas measures installed are reducing annual usage by two million dekatherms, or the annual needs of about 20,000 homes.

Savings achieved, as a percentage of targets, in general are running ahead of dollars spent as a percentage of budgets. As of February 28, 2011, statewide electricity savings represented 49.1% of the cumulative targets to date, and gas savings represented 60.3% of cumulative targets to date, while combined program spending represented 38.9% of budgets to date.

Analyzed on a three-year basis, EEPS programs are behind the schedule to achieve the original goal. A large majority of the shortfall in reaching targets can be attributed to

timing issues surrounding the start-up of the programs. When achievements and forecasts for the 2011 calendar year are viewed in isolation from the previous years, projected electric savings are 96% of 2011 targets. Preliminary 2011 projections for gas are 66%, but that number does not include ancillary savings, nor the future savings from one major program with very long project-completion times. If those two factors were included in the gas projection, it would be close to, or perhaps higher than, the electric forecast. The projection for gas and electric savings, as a percentage of targets, is also expected to improve following the updating of targets to reflect changes in the Technical Manual.

Beyond timing issues, the principal cause of the shortfall appears to be the economic downturn. Program administrators report a reluctance or inability of customers to invest in efficiency improvements. Other causes of the shortfall include: lack of cooperation among program administrators, counterproductive effects of shareholder incentive mechanisms, fuel restrictions and other eligibility restrictions. Each of these factors is addressed in this paper.

Success rates among program administrators vary widely, as do results among customer classes. These variances have numerous causes which range from the timing of program approvals and rollouts to the different ways in which the economic downturn affects customer participation.

Issues

Targets and surcharges. Numerous factors affect the outlook on program targets. Individual program targets are in the process of being revised to account for changes in the Technical Manual. Also, lighting programs may need to be significantly modified to reflect changing federal law and technological advances. These actions might cause overall program targets to fall below the jurisdictional portion of the 15 by 15 goal. On the other hand, it is possible that program performance will begin to exceed targets; this could occur due to the conclusion of the roll-out period, economic factors, or other program improvements. If a shortfall by 2015 seems likely, the Commission might consider adding new programs, or expanding existing programs. Because of the extended period of program approvals and roll-outs, utilities have collected over $300 million in surcharges that have not yet been committed. Notwithstanding the existence of uncommitted funds, Staff recommends that surcharges should continue at current levels until more experience is gained with the fully-initiated program portfolio. It is possible that the uncommitted funds may be needed for new or expanded

programs. After more experience is gained, the Commission might suspend surcharge collections for a period of time to allow program expenditures to catch up with collections.

Incentives. Incentives were put into place to encourage excellent performance from utilities and to hold them accountable. At this point, it appears that many or most utilities will experience negative adjustments. Utilities argue that this is due to events beyond their control, such as the poor economy. A program-by-program retrospective review, to quantify the effect of such events, would be time-consuming and adversarial. Without question, incentives have captured the attention of utility management. Unfortunately, in Staff's judgment, there have been unintended consequences from the incentive mechanism that have had an adverse impact on the overall program. Staff recommends that incentives be eliminated after 2011, with discussions to explore improvements or alternatives to the incentive mechanism.

Outreach. To date, most customer outreach has been performed at the individual program level. Staff's review of these outreach measures indicates generally satisfactory performance. The imminent start-up of a statewide outreach and education campaign should contribute to an increase in customer participation at every level of the EEPS program.

Outliers. Our analysis shows nine electric programs and nine gas programs identified as positive outliers, and five electric programs and six gas programs identified as negative outliers. For most of these programs, the anomalous numbers are explained and no action is needed at this time. For several program, the anomalous numbers indicate a need for change. Five specific recommendations are made, based on the analysis of outliers.

Evaluation, Measurement and Verification (EM&V). Evaluation Guidelines are in place, and refinement of the tools needed to perform EM&V continues. This is a cooperative effort involving the Evaluation Advisory Group established by the Commission, and involves continual interaction with industry and regulatory participants across the country. Although there are insufficient data for evaluation of most EEPS programs, those that have been evaluated to date show a reasonable correlation between reported results and evaluated results.

Non-jurisdictional wedges. Federal initiatives on appliance standards, as well as California's adoption of television efficiency standards, and improvements in New York's Energy Code related to building projects, are very positive developments offering long range savings that could exceed those projected in the 2008 EEPS Order. Delays in rulemaking and other factors, however, make it unlikely that additional savings will be realized within the 2012-

2015 timeframe. Staff concludes that the estimate of savings from codes and standards in the 2008 EEPS Order remains reasonable. LIPA and NYPA report shortfalls in achieving current targets, but progress toward meeting 2015 goals. Staff has performed no analysis of LIPA and NYPA programs.

Workforce development. One of the major concerns when EEPS was initiated was whether there would be an adequate number of trained professionals and skilled workers to implement the programs. The workforce initiatives implemented by NYSERDA have been highly successful. Program administrators report no shortage of trained workers. NYSERDA indicates more funds may be needed to maintain programs and adapt them to changing circumstances.

Split incentives. Split incentives have prevented rental buildings from fully participating in efficiency programs. Progress has been made with regard to split incentives in commercial buildings. Split incentives in residential housing remain a significant problem.

Process Going Forward

We do not recommend a single action to address all EEPS issues at once. Instead, the White Paper presents recommendations on several crucial issues for Commission action in October, 2011. Other issues are identified for public comment, to be considered in the months following the Commission's action in October.

The recommendations for action in October, 2011 are:

- Reauthorize surcharges and the majority of programs
- Reallocate funds pursuant to our analysis of "outlier" programs
- Consolidate selected programs
- Clarify rules related to year-to-year budgeting and unspent funds from previous years, to increase flexibility for program administrators
- Eliminate the current shareholder incentive mechanism

Accompanying these initiatives are the administrative flexibility measures the Commission adopted at its June 16, 2011 session.

Following the immediate actions needed to maintain continuity for the overall program, consideration should be given to numerous issues as part of a strategy of continuous improvement. In this paper, Staff discusses various issues that should be considered by the Commission for action, either at the October, 2011 session or at a subsequent session. These

issues include:

- Revision of the Total Resource Cost test
- Program revisions in response to the development of lighting standards
- The optimal percentage of program resources allocated to low income programs
- Methods of reducing overlap, or increasing cooperation, between NYSERDA programs and utility programs
- Providing increased flexibility for program administrators
- Expanding program eligibility to temperature-controlled multifamily gas customers
- Self-directed programs for large C/I customers
- Budgets and funding streams for Outreach and Education programs
- Alternative forms of program delivery
- Incorporating NFG's Conservation Incentive Plan into EEPS
- Revising utility cost collection to a capitalization basis
- Providing additional funding for workforce development
- A review of participant eligibility in the context of partial surcharge exemptions

INTRODUCTION

From 1998 until 2008, the majority of energy efficiency programs conducted in the State pursuant to Commission jurisdiction were administered by the New York State Energy Research and Development Authority (NYSERDA) under the System Benefits Charge (SBC) program. The SBC charge is a surcharge that is applied to customer bills. It originated in Case 94-E-0952, the Electric Competitive Opportunities Proceeding, which sparked a restructuring of the electric industry. The SBC program was instituted to ensure that certain public benefit functions (i.e., energy efficiency, research and development, and environmental monitoring programs) that had traditionally been performed by utilities were continued notwithstanding the changes in market structure. The current base annual budget allocation for SBC energy efficiency programs (designated "SBC III") through June 30, 2011 is approximately $87 million.

In addition, immediately prior to 2008, some utility-administered electric and gas energy efficiency programs were initiated to supplement to the SBC energy efficiency programs.

On June 23, 2008 the Commission issued its Order Establishing Energy Efficiency Portfolio Standard and Approving Programs ("the 2008 EEPS Order").[1] The Order adopted efficiency targets and established a process for approval of energy efficiency programs to be administered by the state's electric utilities and NYSERDA. The Order authorized the collection of an increased SBC surcharge from electric customers (approximately $159 million annually) to fund "fast track" programs. The Order estimated that it would cost an average of approximately $330 million annually to reach the targets. Subsequent orders approved efficiency programs, and increased the total annual surcharge supporting EEPS electric programs to approximately $286 million, an amount lower than the $330 million estimated by the 2008 EEPS Order. The 2008 EEPS Order found that the programs were likely to result in net benefits to customers totaling $1.8 billion through 2015.

On May 19, 2009, the Commission issued its Order Establishing Targets and Standards for Natural Gas Efficiency Programs ("the 2009 EEPS Gas Order").[2] The Order adopted an overall gas efficiency target and established a process for approving the gas efficiency programs to be administered by the state's gas utilities and NYSERDA. Subsequent orders approved efficiency programs and authorized the collection of a gas SBC surcharge from gas customers, eventually reaching a total annual surcharge supporting EEPS gas programs of approximately $115 million. This amount is in addition to surcharges already being collected for certain utility-administered programs that predate the EEPS program

On December 30, 2010, the Commission issued its Order Continuing System Benefits Charge Funded Programs ("the 2010 SBC III Extension Order").[3] The Order adopted a six-month extension of SBC III and authorized the transition of SBC III energy efficiency resource acquisition programs to the EEPS portfolio component of the SBC program. The Order

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1 Case 07-M-0548, Energy Efficiency Portfolio Standard (EEPS), Order Establishing Energy Efficiency Portfolio Standard and Approving Programs (issued June 23, 2008).

2 Case 07-M-0548, Energy Efficiency Portfolio Standard (EEPS), Order Establishing Targets and Standards for Natural Gas Efficiency Programs (issued June 23, 2008).

3 Case 10-M-0457, et al., System Benefits Charge (SBC) Programs, Order Continuing System Benefits Charge Funded Programs (issued December 30, 2010).

also provided that collections would be spread out beyond 2011 to better match the timing of collections with the timing of expenditures.

The efficiency programs are generally authorized through December 31, 2011.[4] The overall efficiency targets identified in the 2008 EEPS Order, the 2009 EEPS Gas Order, and the 2010 SBC III Extension Order were also adopted through the end of 2011.[5]

The 2008 EEPS Order stated:

> In addition to the ongoing evaluation of programs, we will institute a comprehensive review of the EEPS initiatives, to be carried out sufficiently in advance of the December 31, 2011 expiration of program authorization, to be available to inform our decisions as to subsequent phases of the EEPS.[6]

This White Paper is an element of that review. It builds upon the quarterly reports that Staff has provided to the Commission. Because many individual efficiency programs are still in early stages, there are insufficient data to perform a comprehensive review of the performance of all programs. The development and analysis of data are ongoing processes. Many aspects of EEPS, however, can be reviewed in this paper, including the performance of programs to date, the processes for program approval and administration, and numerous specific issues of concern to the Commission, program administrators, and participants.

This White Paper supports action by the Commission to reauthorize the surcharge and a large majority of the existing efficiency programs, for the years 2012-2015. We recommend that this action be taken in October, 2011, to provide an orderly continuation of existing programs. Some program changes are recommended to be adopted at that time, as detailed below. Other issues are recommended to be considered in the following months. The general approach recommended here is to continue the overall program, subject to continuous evaluation and improvement. The White Paper is being issued for public comment. In addition to the numerous detailed progress reports and scorecards, the White Paper provides a basis in support of action by the Commission.

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[4] A small number of programs that require long lead times have budgets that extend beyond 2011, and some collections have been spread out beyond 2011 to better match the timing of collections with the timing of expenditures.

[5] A small number of programs that require long lead times have targets that extend beyond 2011.

[6] 2008 EEPS Order at 69.

SUMMARY OF RESULTS

Summary of EEPS results

As of February 28, 2011, program administrators report electric efficiency measures that will reduce annual usage by over one million megawatt-hours, or the annual needs of nearly 160,000 homes. Gas measures installed will reduce annual usage by two million dekatherms, or the annual needs of about 20,000 homes.

Savings achieved, as a percentage of total targets, are running ahead of dollars spent as a percentage of total budgets. As of February 28, 2011, statewide electricity savings represented 49.1 % of the cumulative targets to date, and gas savings represented 60.3% of the cumulative targets to date, while combined program spending represented 38.9% of budgets to date.

Table 1: Key Performance Metrics through February 28, 2011 for Statewide Portfolio

Note: Please see updated version of this table at end of document.

		Electric Programs	Gas Programs	TOTAL
Electric Savings	Net Annual* MWh Acquired	1,028,222	657^	**1,028,879**
	Approved Net MWh Target	2,096,602	N/A	**2,096,602**
	Percent of Net MWh Target Acquired	49.0%	N/A	**49.1%**
Gas Savings	Net Annual* Dth Acquired	532,341†	1,555,846	**2,088,187**
	Approved Net Dth Target	N/A	3,461,256	**3,461,256**
	Percent of Net Dth Target Acquired	N/A	45.0%	**60.3%**
Expenditures	Total Expenditures	$ 174,504,455	$ 51,378,110	**$ 225,882,566**
	Total Budget	$ 456,108,373	$ 124,897,270	**$ 581,005,643**
	Percent of Budget Spent	38.3%	41.1%	**38.9%**

* Net Annual savings acquired in the first year after measure/project installation.
^ Four gas programs report ancillary electric savings.
† Six electric programs report ancillary gas savings.

Most of the shortfall in reaching the targets can be attributed to timing issues surrounding the start-up of the programs. When forecasts for 2011 are viewed in isolation from the previous two years, total annual electric savings equate to 96% of the targets for 2011. The forecasts are provided by program administrators.

The current projections for gas performance in 2011 equate to 66% of targets.[7] This forecast does not, however, include ancillary savings.[8] Ancillary savings have made up nearly 25% of gas savings to date. If the historical percentage of ancillary gas savings were applied, the forecast of actual gas savings would increase to 88% of targets.

Also, the gas savings forecast is heavily influenced by the timing of NYSERDA's Industrial Process and Efficiency Program (IPE), which represents 48% of NYSERDA's dekatherm target. NYSERDA reports that IPE projects can take up to two years to achieve installation of measures. Because of the very long project completion times, NYSERDA projects the bulk of IPE savings will accrue in 2012 and 2013. This has a large impact on the 2011 projection for NYSERDA's portfolio as a whole.[9]

The projected savings, as a percentage of targets, may increase substantially when targets are adjusted to reflect Technical Manual revisions. The Technical Manual provides uniform, measure-specific approaches to estimate the energy and demand savings achieved by EEPS programs and avoid conflicting energy saving estimates for the same measures within different programs. The manual was revised effective January 1, 2011, meaning that for all measures approved on or after January 1, 2011, the EEPS program administrators are required to use the new, updated and consolidated manual to estimate and report their energy savings. These revisions reduce the savings estimates for numerous efficiency measures. The 2011 figures of 96% and 66% provided above are based on savings estimates using the lower Technical Manual assumptions, while the 2011 targets themselves have not yet been revised to reflect the more conservative assumptions. For that reason, if the projected savings are realized, 2011 performance will be higher than 96% (electric) and 66% (gas).

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[7] The gas forecasts are also provided by program administrators, based on actual experience combined with projections.

[8] Ancillary gas savings are gas savings that result from electric efficiency programs. Although they are not included in program targets, they nevertheless constitute a large percentage of achieved gas savings. For example, NYSERDA's Flex Tech program and its New Commercial Buildings program produce more than half of the total gas savings reported by NYSERDA.

[9] Another factor influencing the relative size of the 2011 gas efficiency forecast is the fact that some successful gas programs have been ahead of pace in achieving their targets, thereby requiring a lower amount of savings to be acquired in 2011. The 2011 forecasts provided by the program administrators do not assume an extension of budgets for these programs.

Figures 1 and 2, below, illustrate the cumulative increase in annual energy savings, for electricity and gas, respectively, achieved since the inception of the EEPS program, through February 28, 2011.

Figure 1: MWh Achievements through February 28, 2011

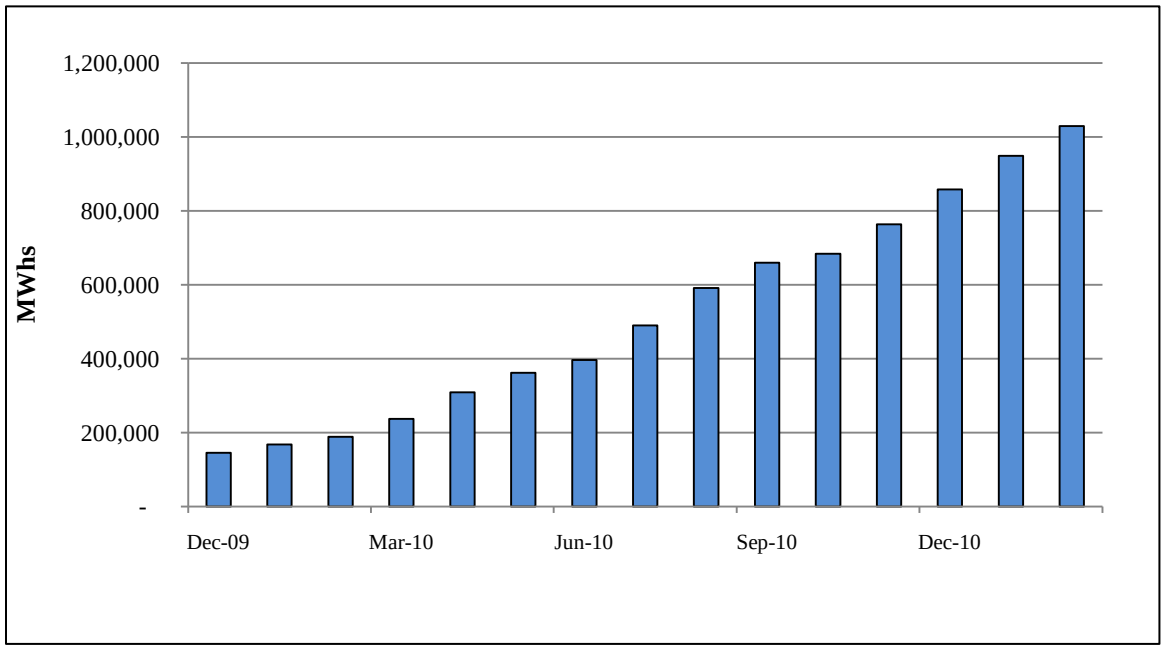
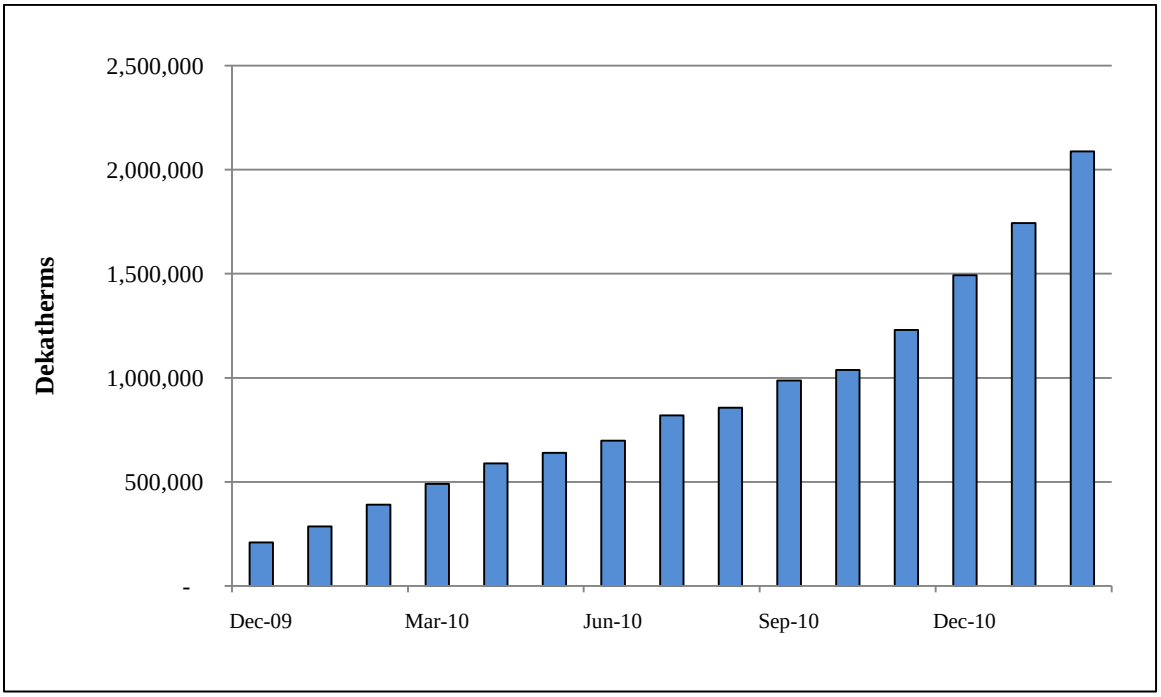


Figure 2: Dekatherm Achievements through February 28, 2011



Success rates among the program administrators vary widely, for a variety of reasons. A breakdown of program performances among administrators is provided in detail in Appendix 1. Results also vary among customer classes. The variances have numerous causes which range from the timing of program approvals and rollouts to the different ways in which the economic downturn affects customer participation. The variances are discussed in Appendix 1.

Discussion

Between 2008 and the close of 2010, 103 efficiency programs were approved by the Commission.[10] Each program approval involved a proposal from a utility or NYSERDA, analysis by Staff, public comment, and, in many cases, substantial revision of the original proposal. During this period, utilities were bringing efficiency staffs into place, technical manuals and evaluation guidelines were being created, relationships with contractors were being arranged, outreach strategies were being started, workforce training was expanded, and the Commission issued a series of clarifying orders.

Accomplishing this multitude of tasks simultaneously, and bringing overall program performance to its current state, was a substantial achievement by the utilities, NYSERDA, and the Commission. Most of the tasks set out by the initial orders have been accomplished, and as illustrated by the 2011 forecasts, the programs are now generally performing at a greatly improved rate.

The annual targets established by the Commission, placing the program on track to accomplish the statewide 15 by 15 goal, were ambitious and aggressive. To the extent shortfalls remain, the causes have been identified and analyzed. The majority of this report discusses potential ways to improve the program.

The causes for underperformance fall into two categories: timing issues, and other causes. Timing issues reflect the very ambitious schedule established in the 2008 and 2009 orders. Program approvals took longer than projected, and roll-out periods for many programs were longer than contemplated at the time the programs were approved. The cumulative effect of the timing issues is a significant shortfall in savings compared to the targets for 2009 and

[10] Three programs of National Fuel Gas that were approved prior to the EEPS orders continue to operate pursuant to a rate order.

2010. The effect of timing issues is shown by the difference between the projected savings for 2011 alone, and the projected savings beginning 2009.

Beyond timing issues, the principal cause of shortfalls appears to be the economic downturn. Program administrators report a reluctance or inability of customers to invest in efficiency improvements. Because most EEPS programs require some form of customer participation, it is highly likely that the severe economic downturn has contributed to programs underperforming.

Other causes for the shortfalls are less obvious. They include a lack of cooperation among program administrators, counterproductive effects of shareholder incentive mechanisms, fuel restrictions and other eligibility restrictions. Each of these factors is addressed in this paper.

Non-jurisdictional wedges

The targets developed in 2008 for electricity savings assumed contributions from improvements in building codes and appliance standards. The cumulative contributions through 2015 from codes and standards were comparable in scope to the cumulative savings from EEPS programs.

Our review of developments in codes and standards since 2015 shows mixed results. On one hand, measures initiated by the federal Department of Energy and the states of New York and California surpass original expectations. This could lead to a conclusion that codes and standards will contribute more savings that initially forecast. Careful analysis, however, shows that the savings from these improvements are likely to take years to be fully realized.

The Long Island Power Authority (LIPA) and the New York Power Authority (NYPA) were also assumed to make significant contributions to the 15 by 15 goal. Each of the Authorities reports progress, but they are experiencing shortfalls in achieving annual targets. We have not analyzed LIPA and NYPA programs or their reported results.

REAUTHORIZATION OF PROGRAMS AND SURCHARGES

Recommendations for Going Forward

Reauthorization of Programs

EEPS was initiated with a Commission call for proposals from the eligible program administrators (regulated utilities and NYSERDA) and third parties who could operate efficiency programs through an eligible program administrator. The call drew 161 proposals. The Commission laid out a set of criteria for examining the proposals, placing significant weight on cost effectiveness as measured by the TRC test, but balancing that test with a range of other factors. These factors included impact on peak load, availability of programs for all sectors in appropriate territories, and an equitable concern for low income ratepayers.

Reviewing the large number of proposals was a difficult task on an ambitious timetable. It was complicated by limited staffing among utilities that had not been in the energy efficiency business in a significant way for two decades, incomplete applications, the vast array of alternative programs offered, uncertainty regarding the estimated costs, benefits and marketability of various measures, and the sheer volume of work involved. Completing the task of program approval took longer than was planned in our aggressive timetable.

Programs now have momentum, in terms of marketing, customer awareness, processing infrastructure, and contractor relations. Our quantitative analysis, although it cannot be comprehensive at this time, indicates that EEPS programs are making satisfactory progress. Our recommendation is a strategy of continuous improvement of the suite of programs that are now in place. Under this approach, most programs will continue as approved with modifications taking place as required (for example, to respond to new federal lighting standards) or to enhance customer satisfaction, program cost effectiveness or other performance metrics. Our current review, however, found some programs are negative outliers that warrant redesign or outright termination. Others may be found to be positive outliers worthy of expansion or replication by other program administrators. Aside from the treatment of outlying programs, continuity of the overall program at this time should be preserved.

Program Targets

The 2008 EEPS Order identified the Commission's jurisdictional portion of the statewide goal for electric savings. The jurisdictional goal was expressed in terms of Megawatt-

hours, by calculating 15% of forecast usage for 2015 and subtracting expected contributions from existing programs, entities outside the Commission's jurisdiction, and improvements in building codes and appliance standards. The result of these estimates was a jurisdictional goal of 7,687,095 MWh.

The 2009 Gas Order established interim targets through 2011 and a statewide savings target for 2020. Targets were assumed to be reduced in 2012 and beyond, to account for higher spending on low-income programs. Individual gas utilities were not assigned targets, other than program-specific targets. The Gas Order stated an annual target of 3.45 Bcf to be used for planning purposes through 2020. Because there is no statewide 15 by 15 goal for gas, the gas targets are used more as a planning and evaluation tool than as a means for achieving a specific goal.

The electric targets in the 2008 EEPS Order were adopted for the 4th Quarter of 2008 through the year2011.[11] The aggregate of approved electric program targets for year 2011 is 1,497,131 MWh. If that aggregate target were continued and applied each year through 2015, achievement of those targets would result in cumulative savings of approximately 9.3 million MWh in 2015. That level of targets would exceed the jurisdictional goal of 7.7 million MWh set in 2008 by approximately 21%.[12]

The 2008-2011 Targets, however, will be revised to reflect the changes in the Technical Manual. In that regard, Staff was directed to compile program administrator requests and to present the Commission with a recommendation on the need for restated targets, if any. This Staff recommendation will be noticed in the State Register for comment before any Commission action. Evaluation of the program administrator requests is currently underway. Preliminary estimates of the extent of changes Staff will recommend due to Technical Manual revisions are in the range of 5-15% reductions. Some of the 2008-2011 Targets for individual

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[11] Targets in 2008 were further allocated by utility service territory, to specify minimum levels of programs that each utility needed to propose. Now that a portfolio has been approved, and will be adjusted only as needed, the purpose of the initial utility-specific targets has been achieved and such targets are no longer needed. The purpose of annual aggregate targets, to the extent they were used to guide approval of programs, has also been achieved.

[12] Cumulative electric saving targets through 2011 are 3,321,272 MWh. This is short of the target in the 2008 EEPS Order of 4,557,063. The current cumulative target through 2011 is lower because it does not include savings lost due to the time lag between the Order and program approvals.

programs may also be reduced and restated in response to various program-specific petitions pending before the Commission.

New individual program targets and budgets are needed for the period 2012 through 2015. In setting those targets and budgets, we recommend a consideration of the following factors:

(a) The starting point for any individual program target should be the 2011 target after it is restated or reduced to reflect necessary adjustments due to implementation of the Technical Manual and the result of any reduction or restatement restated in response to various program-specific petitions pending before the Commission;

(b) Individual program targets going forward should reflect reasonably achievable annual levels of targets and budgets informed by the most recent annual rate of spending and performance and new projections of post-start-up performance rates;

(c) Individual targets and budgets going forward should not include a global rollover of unachieved savings and unspent funds from the 2008-2011 time period;

(d) Unspent and uncommitted funds from the 2008-2011 time period should either be (i) budgeted as supplemental funding for specific successful individual programs that are exceeding their 2011 budgeted performance level; (ii) budgeted for new specific individual programs for the program administrator to meet unmet needs (such as new "block-bidding" programs); or (iii) be available to the program administrator for supplementing any of its programs that are achieving above 100% of targets, unless or until the Commission directs another use of the funds; and

(e) Targets and funding of programs in aggregate should be modulated to create a trajectory that will reasonably lead to achievement of the Commission’s jurisdictional goal of 7.7 million MWh by 2015.

To the extent possible, these factors should be reflected in program reauthorizations occurring in October, 2011. As a practical matter, refinement of program budgets and targets will continue to occur in the months following October, 2011. For example, new lighting standards and technologies are likely to warrant a substantial change in program targets and budgets. The changes needed to address lighting issues are not likely to be determined in time for Commission action in October 2011.

The fact that Technical Manual and lighting revisions are likely to result in lower targets for many programs raises the question whether the Commission should reconsider the jurisdictional goal set out in the 2008 EEPS Order. The annual targets, however, reflect many assumptions other than those reflected in the Technical Manuals. Economic trends, for example, have had a major impact on the achievability of the efficiency targets. The negative influence of the economic downturn was not assumed in the 2008 forecast. Nor is the potential positive influence of an economic recovery assumed in the forecast through 2015. Because program administrators have uncommitted funds at their disposal, the programs that are now fully functional could exceed their annual targets. Another factor that could lead to a higher achievement rate is the statewide Outreach and Education program, which is expected to begin late in 2011.

Changes in Codes and Standards were assumed to be a large factor in achieving the statewide 15 x 15 goal. These changes have the potential to exceed the levels estimated in the 2008 Order, but implementation delays may prevent this from occurring. Increased contributions from Codes and Standards, however, may override some of the more cost-effective EEPS programs, such as lighting, which will further increase the average cost of each MWh achieved through efficiency programs.

It is not possible to predict any of these individual factors with precision; calculating their combined effect is therefore even less precise. The limited experience we have had to date with many of the approved programs also warrants caution in revising the overall electric savings goal at this time.

We recommend that the overall annual targets for electric savings should be used in the same way that annual gas targets are used, as a planning and evaluation tool. After the existing program targets are revised to reflect Technical Manual and other changes, and outlier adjustments have been made to the portfolio, it may be that additional efforts will be needed to place the entire portfolio on track to meet the original planning goals. This could be accomplished through a solicitation for new programs, or by adding funding to existing programs that are performing well and have the potential for expansion.

Funding for new programs could be derived from one of three sources without exceeding the cost projections contained in the 2008 EEPS Order. First, as described above, the current electric surcharges of $286 million are $44 million lower than the $330 million per year

projected in the order. Second, as discussed below, program delays have resulted in a substantial lag between surcharge collections and cash outlays. New programs, should they be deemed necessary, could be funded from the lag funds. Third, funding currently allocated to cancelled outlier programs can be reallocated.

The NYISO has identified a concern relevant to its planning process. Assuming that EEPS programs are able to meet the targets for 2012-2015, will they also be able to exceed annual targets to make up for MWh shortfalls from 2009 to 2011? We do not recommend that program targets, across the entire portfolio, be adjusted to make up for past shortfalls. Given the impact of economic changes on program performance, it is possible that an economic recovery could contribute to the 2012-2015 annual targets being exceeded. It is also possible, as discussed above, that following the revision of program targets, the Commission may determine that new programs or an expansion of existing programs are needed to achieve the 2015 goal.

The NYISO has also proposed that funding levels and targets should be reduced moderately, and authorizations should be extended to 2018. According to the NYISO, this would make the overall targets more achievable and more reliable for purposes of NYISO's planning process. We do not recommend adopting this course at this time. We anticipate that programs will be spending at their authorized levels by the end of 2012. Also, there are many factors that contribute to uncertainty in the actual achievements of efficiency programs; the NYISO must take those into account in any event. Reducing the targets might allow the NYISO to have increased confidence in the efficiency savings for planning purposes, but such an action would also reduce the total level of potential savings.

Adjusting for Outliers

Defining Outliers. For purposes of our review, an outlier is a program whose performance, measured by a series of routinely tracked metrics, deviates significantly from the performance of other programs. We have identified outliers through a process of reviews that develop a perspective on why a program is performing as it is, and the prospects for its future performance. Analysis of outliers will continue as part of the overall strategy of program improvement.

DPS staff has examined each program in the EEPS portfolio with respect to a number of routinely tracked metrics, among them a program's percent of savings versus its targeted savings, its percent of savings versus percent of spending, and dollars spent per kWh

saved. These metrics are used to examine a program in the context of all programs, all programs in the same sector, and all programs operated by a single program administrator. When a program is outside the norm (for example, nine programs out of ten in a sector are achieving approximately the same percent of savings compared to their targets, but the tenth is at one third that level of savings), it is deemed an outlier.

This determination involves the application of professional judgment. There is no simple rule to be applied. Instead, staff examines patterns of performance and identifies those that fall outside the mainstream.

Once outliers have been identified, the next step is to explore the reasons behind their variation in performance. This activity involves input from the program administrator. A program reporting no energy savings might be far behind schedule or it might involve measures that take a long time to design, install and commission. The program's budget might be fully committed, but the projects not completed. A program that appears to be far ahead of its target may have provided excessive customer incentives. The reasons why a program is an outlier need to be fully analyzed.

Once a poorly performing outlier has been identified, staff develops a recommendation to the Commission for action. The range of options includes changes to improve program performance, reallocation of the budget to another program in the administrator's portfolio that is performing better, a call for a proposal for a replacement program, or reallocation to another program administrator.

When a program is performing outstandingly well, staff analyzes the factors that contribute to its success (program design, customer incentive levels, geographic factors, etc.). The Commission might then request other program administrators to examine whether that program, or certain elements of that program, could be applied to their portfolio.

With routine "scorecard" reporting in place and many of the start-up problems surrounding reporting and evaluation resolved, outlier review can be performed on an ongoing basis. Tying the review of outliers to the preparation of quarterly reports is one possibility. Selective reviews can also be performed on a sequential basis, of narrower slices of the EEPS portfolio: a program administrator, a sector, a type of program design, or a technology at a time.

Analysis of Outliers.

Electric Programs - Outliers

Sector	PA	Program	Percent of Net MWh Target Acquired in 2010	Percent of Budget Spent in 2010	Percent of Prorated Net MWh Target Acquired in 2011	Percent of Prorated Budget Spent in 2011	*2010 Dollars Spent per MWh Acquired*	*Approved Budget per MWh target*
C&I	NYSERDA	Existing Facilities Program	298.0%	209.0%	240.4%	207.9%	*$ 168*	*$ 239*
MF	RG&E	Multifamily Program	287.0%	64.5%	590.9%	159.1%	*$ 181*	*$ 805*
Res	Cen. Hud.	Res. Appliance Recycling*	152.7%	77.5%	100.1%	34.8%	*$ 232*	*$ 457*
Res	Con Edison	Residential Room Air Conditioning	128.1%	111.6%	0.0%	18.5%	*$ 992*	*$ 1,139*
C&I	NYSERDA	New Construction Program	10.3%	22.1%	15.8%	43.9%	*$ 1,461*	*$ 680*
C&I	Con Edison	C&I Custom Efficiency Program	1.7%	8.1%	49.0%	45.0%	*$ 3,154*	*$ 667*
Res	NiMo	Enhanced Home Sealing	0.0%	10.8%	0.0%	11.1%	*N/A*	*$ 613*
C&I	NYSEG	Block Bidding Program	0.0%	15.6%	46.5%	5.6%	*N/A*	*$ 464*
C&I	NYSEG	C&I Custom Rebate Program	0.0%	36.0%	2.8%	108.3%	*N/A*	*$ 375*
C&I	NYSERDA	Agricultural Energy Efficiency	0.0%	0.0%	0.0%	4.0%	*N/A*	*$ 903*
C&I	NYSERDA	Benchmarking and Operations Eff.	0.0%	1.0%	0.0%	0.1%	*N/A*	*$ 423*
MF	NYSERDA	Geothermal Heat Pump	0.0%	20.3%	0.0%	70.1%	*N/A*	*$ 373*
C&I	RG&E	Block Bidding Program	0.0%	19.5%	455.7%	247.0%	*N/A*	*$ 576*
C&I	RG&E	C&I Custom Rebate Program	0.0%	6.6%	0.0%	10.0%	*N/A*	*$ 387*

Gas Programs - Outliers

Sector	PA	Program	Percent of Net Dekatherm Target Acquiredin 2010	Percent of Budget Spent in 2010	Percent of Net Dekatherm Target Acquiredin 2011	Percent of Budget Spent in 2011 to date	*2010 Dollars Spent per Dekatherms Acquired*	*Approved Budget per Dekatherm target*
Res	O&R	Residential HVAC Program	154.0%	117.8%	98.7%	62.9%	*$ 30*	*$ 39*
Res	KED-LI	Residential HVAC Program	149.7%	169.1%	0.0%	16.9%	*$ 71*	*$ 63*
Res	NiMo	Residential HVAC Program	144.4%	178.9%	88.6%	19.1%	*$ 27*	*$ 21*
Res	RG&E	Residential HVAC Program	138.8%	116.6%	92.7%	72.9%	*$ 16*	*$ 19*
Res	NYSEG	Residential HVAC Program	115.8%	133.6%	70.9%	54.7%	*$ 24*	*$ 21*
Res	Cen. Hud	Residential HVAC Program	55.0%	81.3%	62.0%	54.8%	*$ 39*	*$ 26*
Res	KED-NY	Residential HVAC Program	54.6%	95.2%	18.5%	66.3%	*$ 107*	*$ 62*
Res	Con Edison	Residential HVAC Program	34.4%	51.8%	98.5%	104.5%	*$ 90*	*$ 60*
Res	KED-LI	Enhanced Home Sealing	0.7%	77.4%	9.7%	34.0%	*$ 10,617*	*$ 96*
Res	KED-NY	Enhanced Home Sealing	0.1%	19.0%	0.3%	58.5%	*$ 20,551*	*$ 104*
Res	NiMo	Enhanced Home Sealing	0.0%	25.0%	0.0%	8.5%	*N/A*	*$ 62*
C&I	NYSEG	C&I Custom Rebate	0.0%	6.4%	15.8%	26.2%	*#DIV/0!*	*$ 45*
C&I	NYSERDA	Agricultural Energy Efficiency	0.0%	0.0%	0.0%	5.7%	*N/A*	*$ 92*
C&I	NYSERDA	New Construction	0.0%	8.5%	0.0%	17.7%	*N/A*	*$ 18*
C&I	RG&E	C&I Custom Rebate	0.0%	6.0%	0.0%	23.7%	*N/A*	*$ 46*

Positive outliers. As indicated in the tables above, several electric and gas programs have been identified as outliers due to their performance in reaching the authorized energy savings goals (MWh or dt). Some programs have reported positive results for the 2010

EEPS program year and beyond; several have only recently been able to report energy savings, or have reported none at all.

The electric programs with the greatest percentage of savings achieved in 2010 as compared to the authorized energy savings goal were NYSERDA's Existing Facilities program and RG&E's Multifamily program. NYSERDA's Existing Facilities program was based on an existing SBC III program and, as such, the program was quickly up and running. It is anticipated that many of the reported savings are a result of the installation of efficient lighting measures. NYSERDA expects the achievement level in 2011 not to be as high as in 2010. RG&E's Multifamily Program was able to capitalize on its ability to engage a number of enthusiastic property owners with a significant number of rental units, condensing the "decision making" process and making it easier to get measures approved for installation. The RG&E program was also dependent on lighting measures to achieve its energy savings.

Other electric programs that achieved significant savings are Central Hudson's Appliance Recycling program and Con Edison's Residential Room Air Conditioning program. Central Hudson's Appliance Recycling program used innovative processes like centralized air conditioner "drop off" events, and limited pickups to customer who were also trading in both air conditioners and refrigerators; both of which minimize administrative costs. While Con Edison's Residential Room Air Conditioning program did achieve large savings in the 2010 program year, due to changes made in usage assumptions contained in the current Technical Manual, Con Edison does not expect this program to be as effective in 2011. It expects the program to meet approximately 65% of its 2011 target.

There were several programs that experienced modest savings in 2010, but have recently begun reporting high savings in 2011. These programs include: NYSERDA's New Construction program, Con Edison's C&I Custom Efficiency program, and NYSEG's and RG&E's Block Bidding programs. For each of these programs, the Program Administrator (PA) has indicated that the long lead time built into the program design caused it to take several months to move projects through the program. As a result, these programs have now worked through that lag and are reporting savings. NYSERDA's electric and gas Agricultural Energy Efficiency program similarly had no reported savings in 2010. Since being approved in June 2010, NYSERDA has seen an overwhelming response from eligible participants and has stopped taking new applications. It expects the requests it has will exceed the available funding.

Of the gas programs, PAs have seen a positive response to their Residential HVAC programs. Five of the eight approved programs are reporting savings at rates greater than 100% for 2010. The success of these programs may be attributed to several factors: the programs were not complicated and were easily marketed to potential participants; federal funds and tax incentives were also available to participants; and there was a favorable environment for oil-to gas conversions (high oil prices with low natural gas prices).

Negative Outliers. At the other end of the spectrum, there are several programs that have achieved little or none of their expected energy savings. The PAs have indicated that these programs were affected to a great degree by the downturn in the general economy. These programs include NYSEG's and RG&E's electric and gas C&I Custom Rebate programs.

Some of these programs have failed to report savings due to other reasons. For example, the Home Sealing programs offered by the National Grid companies have not recorded savings in 2010 or 2011. A review of the program reports indicates that the majority of home audits conducted to date have detected health and safety issues (presence of mold or asbestos; improper ventilation). Because the companies' policy relies on the use of BPI certified contractors, and BPI certification prohibits action on efficiency measures until such time as the health and safety issues are addressed, the program continues to show no savings toward the goals. The company has attempted changes to the program designed to encourage contractors to work with homeowners to correct the deficiencies identified. It is unclear whether these programs will be able to reach their authorized goals.

Two NYSERDA programs, Benchmarking and Operations Efficiency, and Geothermal Heat Pump, are not reporting savings toward their authorized targets. For the Benchmarking and Operations Efficiency program, NYSERDA expects that the statewide program will begin to attach participants. It reports that approximately 15 contractors are now available for the program. However, this program is closely aligned with, and may duplicate, the Flex Tech program. As a result, it suffers from program confusion. The Geothermal Heat Pump program may be limited by the program's requirements; buildings must be heated electrically to be eligible for the program. It is unclear if a customer base exists in sufficient size to reasonably support this program.

While the following programs do not appear in the charts above, National Grid and Niagara Mohawk have recently proposed to eliminate windows from their Residential

Energy Star programs, leaving only one measure, programmable thermostats (and in the case of Niagara Mohawk electric, refrigerator/freezer recycling). We believe it is unwise to maintain an EEPS program for the sole purpose of distributing rebates for programmable thermostats.

Recommendations

The Commission should direct each utility PA to propose programs similar to NYSEG and RG&E's Block Bidding programs, or explain why such an approach would not work within its service territory. Such proposals should identify funding to be reallocated from C&I programs that are performing less well.

The Commission should direct NYSERDA to cancel its Multifamily Geothermal Heat Pump program and request reallocation of its funding to a higher performing program, or explain how the program will achieve savings in the near future in accordance with original expectations.

The Commission should direct the National Grid companies to cancel their Enhanced Home Sealing programs and request reallocation of the funding to higher performing residential programs, or explain how the programs will achieve savings in the near future in accordance with expectations.

The Commission should direct NYSERDA to analyze whether the Benchmarking and Operations Efficiency program should be subsumed within the Flex Tech program.

The Commission should direct the National Grid companies to cancel their Residential Energy Star programs and request reallocation of funds to higher performing residential programs, or explain how the programs will achieve savings in the near future in accordance with expectations. The recycling component of the Niagara Mohawk program should be proposed to be spun off into a stand-alone program.

Consolidation of Programs

In some cases, programs should be consolidated to reduce customer confusion and the overlapping programs. Also, certain programmatic barriers can be removed to streamline the programs to be able to operate in a more effective and efficient manner. Consolidation, if not properly performed, presents a risk of unbalanced portfolios and diminished accountability.

Staff proposes several changes to consolidate and improve the effectiveness of certain EEPS programs. The recommendations are based on a number of factors which include: comments from parties; Staff interviews of program administrators; and Staff's findings to date.

Staff recommends the following:

1. Niagara Mohawk should be allowed to incorporate its Commercial High Efficiency Heating and Water Heating Program into its commercial and industrial programs. This is consistent with the downstate National Grid companies and the other utility EEPS programs.
2. Each National Grid company should be allowed to combine its commercial and industrial programs and the Commission should eliminate its requirement that the industrial funds be dedicated to industries classified by the Standard Industrial Classification (SIC) coding.[13] These changes would expand the potential pool of C&I customers that could receive energy efficiency services, potentially reducing administrative costs. It would provide National Grid a C&I program similar to the existing C&I EEPS programs offered by the other utilities and NYSERDA.

We invite comment on the question whether more programs should be consolidated; specific candidates for consolidation should be identified.

Surcharges

EEPS programs are funded through the System Benefits Charge. Utilities are authorized to begin collecting surcharges from customers at the time the programs are approved by the Commission. In the case of NYSERDA programs, utilities are ordered to collect the surcharges and contract with NYSERDA for program implementation.

Because of the ambitious schedule for approving and initiating programs, there has been a substantial time lag between the collection of surcharges and the spending of funds.[14] Authorized annual electric surcharges have increased from $160 million in 2009 to $286 million

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[13] "The EEPS funds that are being authorized in this order are for the purpose of serving the large industrial customer market segment. Those funds should be dedicated exclusively to customers that are clearly large industrial (i.e., with appropriate Standard Industrial Classification [SIC] coding, etc.)." Case 09-G-0363 – Petitions for Approval of Energy Efficiency Portfolio Standard (EEPS) Gas Energy Efficiency Programs. CASE 07-M-0548 – Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard. ORDER APPROVING CERTAIN LARGE INDUSTRIAL CUSTOMER ENERGY EFFICIENCY PROGRAMS WITH MODIFICATIONS AND REJECTING ANOTHER (Issued and Effective September 18, 2009) at 11.

[14] By "spending," in this context, we mean commitment to customer projects.

in 2011. As of February 28, 2011, approximately $500 million in electric surcharge had been collected.[15] Approximately $248 million had been expended or committed, leaving approximately $252 million collected but not yet committed to projects.

The ratio of uncommitted gas funds to gas collections is almost the same as that for electric. As of February 28, 2011, approximately $133 million had been collected and approximately $67 million had been expended or committed. A detailed description of authorized collections and funding commitments for is provided in Appendix 2.

The current balance of uncommitted funds presents the question whether surcharge collections should be suspended in order to allow commitments to catch up with collections. A similar action was taken for the SBC program administered by NYSERDA.[16]

It is important to bring collections into better parity with expenditures. We do not recommend an immediate suspension of surcharge collections, however, for several reasons. The timing of EEPS program initiation and implementation has shown considerable volatility. Now that the large majority of EEPS programs have been rolled out, spending rates are likely to increase considerably. Central Hudson, for example, petitioned the Commission in May for authorization to defer 2011 expenses for its commercial programs into 2012, in anticipation of exhausting all of its allocated funding prior to the end of 2011. The ratio of collections to commitments varies considerably among program administrators; consequently, a one-time across-the-board suspension of surcharges would not be effective.

As noted in the discussion of targets, it is possible that the Commission may need to approve additional programs, or expand existing programs, to achieve its jurisdictional share of the 15 by 15 goal. It is possible that the uncommitted funds might be the best source of funding, to avoid a need to increase surcharges.

The existing surplus exists because EEPS programs have taken time to work through the approval and roll-out phases. Thus, it would be ill-advised to take any steps that could interrupt or complicate the continued progress of the programs. Suspending surcharge collections at this time, only to have to increase them at a later time, would be counterproductive.

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[15] Actual collections vary depending on sales forecasts, though they are subject to a true-up.

[16] Case 10-M-0457, In the Matter of the System Benefits Charge IV, Case 05-M-0090, In the Matter of the System Benefits Charge III. ORDER CONTINUING SYSTEMS BENEFIT CHARGE FUNDED PROGRAMS (Issued and Effective December 30, 2010).

After another year of experience, and after the Commission has had the opportunity to address the potential need for new or expanded programs, we recommend that the status of the surcharge be reappraised.

Related Issues

Cost Effectiveness Tests

Numerous cost effectiveness tests have been used, or have been proffered for use in assessing energy efficiency. The test that is used most often in the utility industry, and in New York, is the total resource cost test (TRC). It assesses the extent to which the cost of buying and installing an energy efficiency measure is exceeded by the savings associated with the traditional supply resources that the energy efficiency measure allows the utility system to avoid.

Numerous parties, at various times in the last 25 years, have criticized the TRC and have put forward alternative cost effectiveness tests. In the 1980s, the most often-cited alternative was the ratepayer impact measure test (RIM), sometimes referred to as the non-participants test. The RIM has been little used because of its focus on rate levels rather than bills, and because it was too stringent to be of value in decision making.[17]

The parties submitting comments in this proceeding put forward two alternatives to the TRC. The alternative is really a family of alternatives, all of which are founded on the TRC, but involve adjustments to the TRC purporting to make the TRC perform better. The second alternative is the use of the program administrator cost test (PAC), previously known as the utility cost test.

The alternatives described in this white paper are the following:

1. Total Resource Cost Test (TRC)

The TRC test measures the benefits of reduced energy consumption in terms of the avoided cost of generation, transmission, and distribution of electricity (using their counterparts for gas) and compares them to the sum of: (a) the cost to the consumer of the energy efficiency measure and; (b) the cost of running the energy efficiency program by the utility (or by the non-utility program administrator, where applicable). The incentive payments, or rebates,

[17] An energy efficiency measure will fail the RIM whenever the utility's retail price of electricity (or gas) exceeds the utility's marginal cost of providing electricity (or gas). Since prices generally do exceed marginal costs in the utility industry, the RIM test is almost never passed by a proposed energy efficiency measure.

used by programs to boost consumer adoption of energy efficiency measures, do not factor into the TRC.[18]

2. Total Resource Cost Test Including Explicit Estimates of Non-energy Costs and Benefits (TRC B&C)

The TRC B&C test is the same as the TRC test, except that it expends the additional effort needed to place explicit dollar values on the hard-to-quantify benefits and costs of each efficiency measure. It is more complete than the TRC, which focuses on the more straightforward and more easily quantifiable costs and benefits.

3. Total Resource Test, With Limited Additions to Reflect the Environmental Cost of Carbon (CO_2), Sulphur Dioxide (SO_2), and Nitrogen Oxide (NO_x) Air Emissions (TRC + CSN)

The TRC + CSN test attempts to rectify the major shortcoming of the TRC, focusing on its failure to account for the environmental cost of air emissions. Compared to the TRC B&C test, it chooses just three major air pollutants for which cap and trade programs have been implemented, and prices them out as part of the avoided cost associated with saved energy.

4. Total Resource Cost Test with 0.7 Deemed to Be a Passing Score (TRC 0.7)

The TRC 0.7 test represents a proposal to acknowledge the shortcoming of the TRC associated with its failure to include hard-to-quantify benefits by changing the TRC's passing score parameter from 1.0 to 0.7.

5. Program Administrator Cost Test (PAC)

The PAC test, previously known as the utility cost test, measures cost effectiveness from the utility's perspective. It measures the benefits of reduced energy consumption in terms of the avoided cost of generation, transmission, and distribution of electricity (using their counterparts for gas) and compares them to the cost of running the program administrator's energy efficiency program. Incentive payments, or rebates, are included in the definition of program costs.

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[18] The TRC ignores incentive payments because they are not truly resource costs. Rather, they are transfers of money from one set of ratepayers (non-participants) to another set of ratepayers (participants). Thus, they are neither added to the utility's program costs nor subtracted from the cost of the measure.

Discussion. The TRC passes the common sense test. It treats any given energy efficiency measure as a substitute for electric (or gas) supply, and compares the cost of the energy efficiency substitute to the cost of traditional utility supply. According to this test, only if the substitute is less costly (i.e., a TRC score of greater than 1.0) should a program be implemented to boost deployment of the substitute. Several criticisms of the TRC are often made, however, that call into question the efficacy of the TRC.

One criticism of the TRC is that it fails to capture the non-energy benefits to consumers of energy efficiency measures. Sometimes these are called "hard-to-quantify" benefits. For example, a home that becomes properly insulated not only lowers energy consumption, but also provides a more comfortable place, free of drafts, for people to live in. The benefit of the more comfortable home is real, yet it is not captured by the way most states, including NY, estimate the TRC. Critics of the TRC assert that the TRC's failure to capture non-energy benefits leads it to produce severely understated benefit/cost ratios.

Along the same lines, there are also non-energy *costs* to consumers of energy efficiency measures that fail to find their way into actual TRC calculations. For example, two hard-to-quantify costs to the consumer of compact fluorescent light bulbs are the dim light some of them produce when first turned on and the need to dispose of them in special collection locations rather than just disposing of them in the garbage (this need being caused by the danger posed by mercury which they contain). It is generally assumed that consumers that install efficiency measures gain more from the non-energy benefits then they lose from the non-energy costs.

Hard-to-quantify benefits also exist that are not specific to any given measure. These include many of the factors that lie behind the Commission's policy of boosting renewable generation, such as: making the state less vulnerable to a shortage of any one fuel such as natural gas; reducing damaging air emissions and other environmental harms associated with power plants; providing a more stable priced source of "energy;" and the creation of jobs in New

York.[19] Environmental benefits, in particular, are a driving force in policy related to energy efficiency yet are hard to quantify. Assuming that the hard-to-quantify benefits of energy efficiency exceed the hard-to-quantify costs of energy efficiency, the TRC, as currently applied, using a strict approach that requires a score of 1.0 or greater, could lead to a Commission policy that insufficiently promotes energy efficiency. In addition, the TRC as used in New York, creates an inconsistency with New York's renewable generation policy which quite explicitly points to a list of hard-to-quantify benefits as the primary reason for seeking increased renewable generation.

Were the Commission to switch to a policy of quantifying the hard-to-quantify benefits and costs, as in option (2) above, this shortcoming of the TRC would be solved. The obvious disadvantage of such an approach is the large amount of extra work and extra controversy that would be involved. Option (3) tackles a subset of the hard-to-quantify issues: the air emissions of CO_2, SO_2, and NO_x. This supplements the TRC with the addition of three of the most well known hard-to-quantify benefits of energy efficiency. This approach is an attempt to strike a balance between the goal of capturing important hard-to-quantify benefits and the goal of avoiding the excessive effort and controversy of trying to quantify the hard-to-quantify factors.[20] Option (4) above, which retains the existing TRC definition but lowers the score needed to pass the test from 1.0 to 0.7, addresses this same problem and does so in a simple to administer way (an advantage). Its disadvantage is that it is a quite blunt, simplistic solution to the problem. Each energy efficiency measure will have its own unique list of hard-to-quantify benefits and costs, yet, according to the proposed option (4), 0.7 would be used for all. Furthermore, 0.7 may not be the right value to use in general.

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[19] The avoided costs used to estimate the benefits of electric energy efficiency do contain adders to reflect the market prices of emissions allowances for NO_x, SO_2, and CO_2. The markets for NO_x and SO_2 allowances have recently been producing unusually low prices that appear to understate the environmental harm of these pollutants. Furthermore, while NY uses a value of $15/ton as a place holder for the cost of CO_2 emissions, it is a conservative value that likely understates the long-run cost of either CO_2 reductions or environmental damage.

[20] We propose a value of $50/ton for CO_2. The SO_x and NO_x values should be derived by taking the average of the prices of allowances that have traded in the SO_2 and NO_x cap-and-trade programs across all the years of the life of these two programs. This approach prevents the very small allowance prices in recent years from decimating the environmental cost estimate one gets for these emissions.

Option (5) – the program administrator cost (PAC) test – would represent a switch to a completely different type of test. Like any other form of cost-effectiveness test, PAC has advantages and disadvantages. Its primary advantage is its simplicity. As noted above, when using the PAC there is no need to quantify the non-energy costs and benefits to the consumer that installs an energy efficiency measure. In fact, for many programs, there is even no need to quantify the cost of the measure itself.[21] A second advantage is that it includes the cost of rebates, or incentives, that are a part of many programs, and, in doing so, tends to rank programs that require small incentives higher than programs that require large incentives.[22] This is valuable when assessing the relative costs of programs in terms of the extent to which they use up the utility's energy efficiency budget.

The primary disadvantage of the PAC test is that it fails to attempt to do any comparison of the cost of traditional electricity (or gas) supply to the cost of its demand side substitute. According to the PAC, the avoided cost of traditional supply (the benefit side of the test) is compared solely to the program administrator's administrative cost (the cost side of the test). The cost of the demand-side measure itself is left out of the calculus. This appears to make the test unfair, or, at best, a comparison of apples to oranges. One can argue that surely the cost of the demand side measure itself is relevant, and any cost effectiveness exercise that ignores it is flawed.

Some parties, in advocating for the use of the PAC, assert that it ensures that all programs are cost effective from an all-ratepayers' perspective. This assertion is not sustainable. The question is whether ratepayers, taken as a group, are made better off by the implementation of an energy efficiency program. For this to hold, the amount by which participants are made better off must exceed the amount by which non-participants are made worse off. It is easy to envision examples of energy efficiency programs that pass the PAC, even though the size of the

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[21] In many EE programs, the consumer pays for the energy efficiency measure. Since the cost of the measure is not borne by the program administrator, it isn't part of the program administrator cost test. The cost of the program (administrative costs, marketing costs, rebate costs, etc.) is part of the test and does have to be quantified.

[22] The TRC, as noted in its definition, ignores incentive payments.

participants' gain falls short of the size of the non-participants loss.[23] Accordingly, the PAC test does not assure that all programs are cost effective from an all-ratepayers perspective.

The Use of Cost Effectiveness Tests. The most basic use of a cost effectiveness test, such as the TRC, is as a pass-fail test: if a program or measure passes the test, it is eligible to be among the ones that receives some of the limited funding that is available; if it fails the test, it is ineligible to receive funding.[24] However, there can be exceptions. For example, in addition to cost effectiveness, one of the goals of New York's energy efficiency initiative is to achieve an equitable distribution of the benefits among the various customer classes. Low income energy efficiency programs, designed to address such equity concerns, can be difficult to implement in a cost effective manner. One way to address these multiple goals is to decide to approve a low income program wherever such a program is reasonably close to being cost effective.

Continuity is an important goal. It is disruptive to start up programs that are deemed cost effective in year one, discontinue them in year three due to a drop in natural gas price forecasts that lower their cost effectiveness scores, and then restart them in year five as gas price forecasts bounce back up again. To address this concern, Staff recommends that existing programs not be re-evaluated at this time for their cost effectiveness. Outliers, for whom there is reason to believe that extreme changes have occurred, should be evaluated at this time generally, including for their cost effectiveness. Otherwise, existing programs should be continued without the need to show that they remain cost effective at today's updated forecasts of avoided costs.

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[23] Consider the following example (all values are in cents per KWH). The retail rate for a full service customer is 10 cents. The energy efficiency measure costs 9 cents. Avoided cost of generation plus transmission plus distribution is 7 cents. The utility energy efficiency program costs 2 cents. The program involves no rebates or incentive payments. The participants are better off by 1 cent: 10 cents benefit in the form of a reduced electric bill, 9 cents cost to install the energy efficiency measure. The non-participants are worse off by 5 cents: 2 cents to pay for the utility's energy efficiency program plus 3 cents to make up for the net revenue that the utility lost when the participants lowered their electricity usage (The utility's net revenue loss of 3 cents reflects a loss of 10 cents in retail revenues offset by 7 cents of avoided costs). The combined effect for participants plus non-participants, which equals the all-ratepayers perspective, is negative 4 cents. Yet, the PAC test compares the utility benefit of 7 cents to the program cost of 2 cents to yield a passing score of 3.50.

[24] Whether a passing score for the TRC test is 1.0 or some other number, such as 0.7, is one of the issues that needs to be decided.

Newly proposed programs, however, should be subjected to cost effectiveness testing, and the tests should be based on updated assumptions about fuel prices, etc.

Wholesale Market Price Effects. In today's electricity industry, consumers have a large stake in the wholesale electric market. Actions that lower wholesale market prices yield valuable benefits to consumers. Of course, generation owners also have a large stake in the markets. Changes in market prices involve offsetting benefits and costs: for every dollar of benefits that a market price reduction creates for consumers, an equal amount of losses are incurred by generation owners. From the overall viewpoint of an economy, a market price reduction, especially if it is just a temporary one, is not necessarily a net benefit. Rather it is a rearranging of monies from one set of market players – generators – to another set if market players – consumers.

For the above reason, the total resource cost test, in assessing the cost effectiveness of energy efficiency measures, does not consider the effect of energy efficiency programs on wholesale market prices. Nevertheless, the Commission may wish to put some weight on the market price effects of its energy efficiency decisions, since it may place greater weight on a dollar of consumer gains than on a dollar of generation owners' losses.

Estimating the long and medium range effects of demand reductions on market prices can be difficult. The most problematic part is accounting for the countervailing effect that occurs on the part of the supply side of the market. Potential new supply entrants might be dissuaded from entering a market if an action is taken that lowers the forecast of future market price. Similarly, retirements of existing generators may be accelerated. To the extent supply-side effects occur, the size of any market price reduction gets moderated. Eventually, as a new supply/demand equilibrium is reached in the longer term, the price reduction effect is completely eliminated. The implication is that, in using models to estimate the price effects that are caused by a policy action, such as energy efficiency programs, it is reasonable to assume that the price effect is short-lived, and is moderated by hard-to-model supply side reactions. It would not be unreasonable to consider market price effects in the valuation of energy efficiency programs; however, if that policy were to be adopted, it should be implemented in a way that reflects these considerations. For example, estimation of price effects might be limited to no more than three

years, and each year's price effect estimate might be reduced by 50% to account for unmodelled supply reactions. [25]

Program Delivery Options

Energy efficiency programs can take a number of forms. Five common types are:

- Behavioral programs, raising people's awareness of their energy use and encouraging them to be more efficient in their habits.
- Audits, generating reports that help define opportunities to improve energy efficiency in a building or a business.
- Rebates, providing a partial payment for the cost of implementing some measure.
- Direct install programs, where a contractor working for the program administrator physically completes the installation of measures for a customer.
- "Deep savings" programs, encouraging customers to undertake a collection of measures together in order to capture the synergies among the individual measures.

Behavioral programs, also called behavioral economics programs, typically seek to motivate a consumer to change his or her energy use behavior by providing comparisons of the consumer's energy use to carefully crafted samples of comparable customers (same general location, building size, building vintage, general design, etc.). These programs have been applied in a number of utility territories across the country and can show savings generally in the 2% to 4% range. By heightening consumer awareness of energy and the consumer's personal ability to impact energy use, they can also be used to encourage participation in programs to install capital energy efficiency measures. By themselves they have not been shown to achieve savings near the levels required to reach the overall goals set for EEPS; they need to be part of a broader portfolio of programs to which they can link consumers.

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[25] Some models contain explicit modeling of new supply entrants and retirements and do so in a way that makes them a function of market prices. To the extent such a model is thought to perform this task well, no 50% reduction of annual price effect estimates would be necessary.

An audit provides a systematic examination of the energy-using features of a building or process, and makes recommendations for improving energy efficiency. The scope and detail of an audit can vary from a walk-through by a trained technician to a comprehensive study by a professional engineer based on data obtained from on-site instrumentation. Audits alone have a very poor track record of leading to implementation of energy efficiency measures. Conversion rates from audit to project in the low single digits are not uncommon. On the other hand, an audit is a necessary first step in a program seeking to properly define the best energy efficiency steps for a particular building. Because audits are usually necessary but not sufficient to induce the installation of energy savings measures, they are generally integrated into broader program designs.

Rebates provide incentive payments for installing energy efficient measures. A rebate might pay some or all of the incremental cost of going from a conventional product to a high efficiency product. For example, a consumer replacing a furnace or installing a furnace in a new home may legally buy a product that is roughly 80% efficient. Furnaces that are up to 95% efficient are available, but generally cost more than a conventional furnace. While the payback on the more efficient furnace over its life may be very positive, the initial increase in first cost can deter some consumers from making the investment in efficiency. A rebate provides sufficient offset in the first cost to cause the consumer to choose the more efficient product. Determining the proper rebate level that will motivate consumer action can be difficult. If it is too low, consumers do not respond; if too high, resources are wasted. As individual consumer financial circumstances vary widely and change over time, defining a single effective, rational rebate level for a program is a constant challenge.

In a direct install program, a program administrator makes all of the arrangements for energy efficiency measures to be installed at a consumer's home or business. The program administrator audits the building to determine what is needed, calculates cost and savings, arranges for materials and installers, in some cases arranges for financing, and executes the project. Direct install programs seek to make the transaction for installing energy efficiency measures simple, thus making energy efficiency projects attractive to consumers who are busy or find the multiple steps in putting a project together daunting. In the commercial sector, small businesses typically find this approach attractive, while large businesses, with their own plant

operating staff or established relationships with engineering consultants, prefer to control projects at their site.

Deep savings programs are designed to identify a comprehensive range of interacting measures at a site and execute as many of them as possible in one project to capture the synergies among the individual measures and capture as many energy savings as possible in one transaction with the customer. A typical example in a residence might be to add insulation to the building, replace windows and conduct air sealing – all of which reduce the energy load of the building – and then install a new, smaller, more efficient heating and air conditioning system. The benefit of reducing the size (and cost) of the heating and air conditioning systems cannot be achieved if conducted alone, without the load reduction measures of insulation, window improvements and air sealing. The value of achieving synergies is undeniable, but the total cost of such a project can be large and less cost-effective than applying more narrowly targeted measures.

Each approach, with variations by different program administrators, has its optimal application. The market for energy efficiency is large and diverse. The programs approved by the Commission to date, and recommended for reauthorization in October 2011, seek to apply the correct approach for each program, given considerations of the type of technology, market, and program administrator. As experience is gained through the evaluation process, we will be open to reconsidering program delivery options where appropriate. Improved cooperation among program administrators might also be an occasion for revisiting – or improving coordination of – program delivery methods.

Sector equity and unmet needs

The EEPS portfolio is intended to provide a balanced array of programs across sectors, territories, and income classes. A substantial mix of programs has been developed. Not all programs in any sector are identical, however. Measures available in one territory might not be in another. This may leave consumers in one part of the state unable to meet their energy efficiency needs. The Commission is taking steps to alleviate this concern and allow program administrators to offer a wider selection of measure options to best suit the needs of their customers.

The mix of program offerings and its match with consumer desires and needs must be periodically reexamined and realigned. This will be particularly true as new

technologies offering superior energy efficiency enter the market. A means to add new technologies to the list of those eligible must be developed and constantly updated.

A fundamental issue facing EEPS is that from several perspectives (reaching very high levels of market penetration for efficiency, achieving the 80% reduction in energy use advocated by some organizations concerned with climate change, or meeting all the energy needs of all low income customers) the demands for resources exceed what can be provided cost effectively and with reasonable rate impacts. In an environment where resources are constrained, a continuous effort to produce the maximum possible return to ratepayers while maintaining balance and equity is required.

The EEPS portfolio of programs was initiated with an expectation that marketing for individual programs would be linked under an umbrella outreach and awareness program. This overarching marketing program was intended to raise consumer awareness of energy issues, heighten consumers' understanding that they can take individual action, and lead participants to EEPS programs. This umbrella marketing program is expected to be in place before the end of 2011 and will fill a significant need by complementing the outreach performed by program administrators.

At this time, the suite of approved programs appears to be reasonably well-balanced, given the constraints described above. One possible exception to this conclusion is the percentage of funding allocated to low-income programs statewide, as discussed below. We encourage comments from interested parties as to whether there are other substantial imbalances in the portfolio, or particular unmet needs.

Regarding "geographic equity," in the EEPS order, the Commission left open the question whether each territory should receive a proportionate share of efficiency services, or whether program approval should be determined simply with respect to cost-effectiveness.[26] Either approach is justified, because EEPS has statewide benefits with respect to environment, wholesale prices, and economic development. In approving programs, the Commission has aimed for geographic equity without invoking a rigid standard.

With respect to inter-class and intra-class equity, a similar rationale prevails. All customers benefit from EEPS. It is impossible for every customer to participate in EEPS;

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[26] 2008 EEPS Order, fn. 29.

however, portfolios are designed within reason to allocate funds among classes in a roughly proportionate manner.

There are continuing concerns regarding particular classes or sub-classes of customers, which may be underserved by EEPS programs, or which may represent underutilized opportunities for efficiency savings. These concerns are addressed in specific sections of this paper, e.g. sections addressing multifamily and low income customers.

Accounting for Enhanced Lighting Standards

As discussed in the section on Codes and Standards, lighting efficiency standards have the potential to produce large efficiency gains and to supersede programs currently funded through EEPS. Even in the absence of new standards, the market transformation efforts of NYSERDA and other program administrators nationwide appear to have been so effective that the need for continuation of some forms of lighting programs is brought into question. Determining how programs should be altered to reflect these positive developments is complex. One complication, for example, is that many programs contain lighting as one component. Staff intends to work with the Implementation Advisory Group to develop a recommendation for the Commission.

Low Income Customers

Energy affordability for low income households has long been a public policy concern in New York. The existence of programs to address this concern reflects the recognition that the total costs, including societal costs, of leaving low income customers without access to affordable utility service can be much greater than the cost of programs to help them save energy and lower bills.

Low income households on average spend a much higher share of their income on energy compared to households at higher income levels. Low income families also tend to live in poorly maintained and energy inefficient housing. Efficiency programs for these customers not only decrease energy costs, but also provide improvements in the comfort, safety, and value of homes.

In addition to efficiency savings, low income programs reduce utility costs associated with credit and collection, arrears and bad debt, deposit maintenance, regulatory expenses, repeated payment plan negotiations, credit agency fees, diversion of revenue from

arrears to reconnection fees and diversion of revenue resulting from forced moves. While such savings may be "hard to quantify," the Commission has generally recognized and considered such benefits in deciding on funding for utility low income programs. In addition, the design of EEPS programs has included consideration of environmental justice concerns, which means that efforts must be made to provide opportunities for low income customers to participate.[27]

The Commission has generally sought to achieve an equitable distribution of energy efficiency program funds. Due to a variety of factors, low income programs may not produce the highest total resource cost (TRC) ratios – but they are cost-effective. All customer segments contribute to EEPS program costs through their utility rates, and all customer segments should have a reasonable opportunity to participate in EEPS programs, and to benefit from lower bills resulting from lowered usage.

A countervailing concern, however, is the higher cost of resource savings achieved through low income programs. While low income programs produce non-energy benefits, such as those described above, and may address environmental justice or other policy interests, the EEPS programs were conceived, designed and implemented primarily to achieve the Commission's portion of the 15 by 15 goal. Achieving this admittedly aggressive goal may require that other policy considerations be given lesser weight.

Purely from an equity perspective, the portion of EEPS residential program funding directed to such programs should be roughly equivalent to the percentage of the population defined as low income. There could be several ways of defining "low income," however, the State has used 60% of state median income (SMI) for determining eligibility for the Home Energy Assistance Program (HEAP), the Weatherization Assistance Program, NYSERDA's EmPower program and utility low income assistance programs. The Office of Temporary and Disability Assistance, which administers HEAP, estimates that of the 7.1 million households in New York State, 2.2 million (31%) are low income using this definition.[28]

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[27] Case 07-M-0548, Energy Efficiency Portfolio Standard, Order Adopting And Approving Issuance Of Final Generic Environmental Impact Statement (issued March 24, 2008), Attachment 1.

[28] Staff performed its own independent calculation using 2009 census information and determined that 30.79% of households in New York State are low income.

Based on this estimate, in order to provide an equitable distribution, at least 30% of EEPS residential funding should be reserved for programs directed to low income households.[29] At present, however, due in part to the need to meet the aggressive energy savings targets, low income energy efficiency programs make up only about 19% of EEPS and SBC residential program budgets.[30]

In addition, it may be reasonable to assume that some participants of general residential EEPS programs are from the low income sector. While low income participation in programs with high cost measures such as building insulation and HVAC upgrades may be low, many low income customers may participate in programs offering low cost measures, such as CFLs. Measuring low income participation simply by reference to programs specifically limited to low income customers may therefore understate opportunities for low income customers to participate in EEPS programs.

In the June 2008 EEPS Order, the Commission reached a policy decision that 20% of the residential fast track programs should be oriented toward low income customers. However, the Commission specifically reserved judgment on whether this was an appropriate level. The Order stated, "the determination that 20% of residential program costs should be directed to low-income customers applies to the fast track program only. The question of whether a definitive target should be established for low-income customers for the EEPS as a whole requires further development in the next phase of the proceeding."[31]

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[29] While not specifically a low income issue, EEPS residential electric programs currently represent only about 18% of total EEPS electric program funding, while residential kWh consumption makes up about 39% of electric usage by end-use customers.

[30] The percentage varies among utility service territories. The percentage of low-income budget among EEPS residential programs alone, without considering SBC, is 14%. This percentage does not include the NYSERDA Assisted Home Performance with Energy Star program (AHPES), as that program serves customers between 60-80% of SMI. If it were included, the overall EEPS/SBC percentage would rise to about 21%. If equitable distribution is to be achieved, however, the low income budget allocation should be devoted to programs serving customers who meet the definition, i.e., either the AHPES program must be excluded in determining the percentage share, or the definition of low income revised to “less than 80% of SMI”. If the low income definition were revised to accommodate up to 80% SMI, approximately 2.9 million (41%) of the state’s households would be classified as low income.

[31] Case 07-M-0548, Energy Efficiency Portfolio Standard, Order Establishing Energy Efficiency Portfolio Standard and Approving Programs (issued June 23, 2008).

In the May 2009 gas targets order, however, the Commission again adopted the 20% of residential allocation for low income, citing large federal funding for weatherization.[32] The Commission explained its allocation to low income programs, in part, because of huge demand for workers from the American Recovery and Reinvestment Act (ARRA) stimulus program. ARRA provided an additional $394 million for the New York Weatherization Assistance Program (WAP); however, ARRA funds must be obligated by September 30, 2011. The May 2009 order explicitly included the expectation that after the ARRA monies were spent, greater EEPS funding would be directed to low income programs – and recognizing the greater cost of resource savings from such programs, savings targets would be adjusted accordingly: "This order establishes a gas efficiency target among firm customers of 4.34 Bcf annually through the end of 2011, based on an estimated annual cost of $130 million, or an incremental cost of approximately $56 million in addition to funds already being collected under the interim and fast track programs. Beyond 2011, the efficiency target is reduced to 3.45 Bcf annually, while maintaining annual spending at $130 million. The downward revision of the target following 2011 reflects a likely change in program balance following the exhaustion of stimulus funding sources."[33]

New York State Homes and Community Renewal (HCR) projects a WAP budget for its 2011 program year (April 1, 2011 – March 31, 2012) of approximately $77 million. The budget for the 2012 program year and beyond is unknown. In the years prior to ARRA, annual budgets for WAP in New York ranged between $45 million and $55 million, however, more than half of these funds came from an 11.5% allocation of Home Energy Assistance Program (HEAP) funds, and future levels of HEAP funding are also uncertain.[34]

Given the policy considerations outlined above, and progress to date in achieving the 15 by 15 goals, Staff seeks the parties' comments and suggestions regarding the optimal portion of EEPS budgets to be allocated to low income programs.

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[32] Case 07-M-0548, Energy Efficiency Portfolio Standard, Order Establishing Targets and Standards for Natural Gas Efficiency Programs (issued May 19, 2009) (May 2009 Order).

[33] Case 07-M-0548, May 2009 Order, supra.

[34] In addition, HCR has requested that that DOE allow weatherization funds to be used as either a loan or a grant. Conversion to loans instead of grants may impose further barriers to low income participation in the WAP program.

- Should low income energy efficiency funding be set as high as 30% of overall funding for the residential sector in order to address equity concerns, environmental justice concerns, and because of the other systemic and societal benefits they produce? Or should the current level (approximately 17-20% of residential program funding) be maintained, in light of the need to meet aggressive savings goals? Is some level between or outside of these figures more appropriate?
- In establishing a reasonable allocation, how should the Commission account for low income participation in general residential programs? Is data available that would document the level of participation in such programs that should be considered as low income?
- Going forward, what is likely to be the effect of interaction with other low income energy efficiency efforts, such as WAP, on EEPS low income program achievements? Will there be a continuing shortage of qualified contractors due to ARRA funded programs? Are there other reasons to expect that EEPS low income programs would experience higher or lower participation rates, compared to other programs?
- To what extent should the level of funding provided for low income customers explicitly take into account the funding levels of other programs, such as WAP? What programs should be considered? Should other programs offered to commercial, industrial and institutional customers, such as offered through NYPA, LIPA and DOE, also be considered in determining the appropriate balance?
- Are there ways to improve the cost-effectiveness of low income programs, so that trade-offs need not be made between achievement of equity/systemic benefits/environmental justice, and achievement of 15 x 15 goals?

Interruptible Gas Customers

Interruptible customers do not use natural gas during peak periods, and therefore do not pay for the assets needed during peak periods. As a result, their rates are lower than those of firm customers. Interruptible customers have been excluded from EEPS programs, and are exempt from paying SBC surcharges. This is partly because they are contestable loads that are able to use an alternate fuel, but also because efficiency improvements on the part of an interruptible customer do not allow the utility to defer acquisition of any assets needed to serve

customers during peak periods. In contrast with most EEPS electric and gas programs, efficiency savings by interruptible gas customers would have no direct system benefits. This is a reason not to require other customers to fund efficiency programs for interruptible customers. On the other hand, there are increased pressures on customers using certain types of oil in New York City to convert to cleaner heating fuels.[35] Interruptible customers in New York City represent thousands of buildings that are using dirtier fuels, and also represent possibilities for efficiency improvements.

There are two types of interruptible customers. The first type is fully interruptible – customers who can be interrupted at any time when delivery capacity or available gas supplies are insufficient to serve them. Interruptible customers can also be divided by whether they are residential (multifamily), commercial or industrial. In addition, most electric generators in New York City are interruptible customers. The second type is temperature controlled (TC). TC customers generally switch to their alternate fuel, or shut down completely, when the outside air temperature falls below 15 degrees Fahrenheit, and do not return to natural gas usage until the temperature rises to 20 degrees Fahrenheit.

When the EEPS programs were first developed in 2008, natural gas and oil were much closer in price than they are today. Currently it appears that interruptible customers could still pay an SBC surcharge on their natural gas bills and save money compared to using oil. However, the margins that utilities expect to achieve from such customers (and likely have been imputed to reduce firm rates) could be reduced by imposing such a surcharge while remaining competitive with alternate fuels. This must be balanced by the fact that interruptible customers in New York City represent a significant portion of the natural gas load, and a significant opportunity to capture energy efficiency that is currently unrealized.

Program administrators for multifamily efficiency programs have told Staff that ineligibility of interruptible customers has limited their participant pool and prevented them from serving customers who could benefit from these programs. Developing an efficiency program specifically targeted to the multifamily TC segment and requiring them to pay an SBC surcharge would provide a vehicle for including this segment in EEPS. Targeting only this segment would leave all other interruptible customers ineligible for EEPS programs but also not

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[35] http://council.nyc.gov/html/releases/07_26_10_heating.shtml

required to pay the SBC surcharge. Multifamily efficiency programs already exist, but have not included TC customers because they were not paying the surcharge. These existing programs could be expanded to include this new group with the additional funding provided by the surcharge revenues from them. While TC customers are typically large, they can vary somewhat in size. However, if a multifamily building using 1,000 Dt/month paid the current SBC surcharge at either Con Edison or KEDNY (both of which are approximately 25 cents per Dt), it would add about $250 to their monthly bill.[36] If 3,000 multifamily TC buildings in New York City paid $250 per month, or $3,000 per year, that would result in $9 million being collected for these multifamily TC efficiency programs.

In order to explore how efficiency programs for interruptible customers can be pursued, Staff has identified the following set of issues that must be resolved:

1. Revenue Issues – Given that some utilities have a certain amount of revenue from interruptible customers imputed into base rates to benefit firm customers, how can efficiency programs for interruptible customers be designed that don't reduce utility revenue or unduly increase firm customer bills? Revenue Decoupling Mechanisms (RDMs), which remove the disincentive a utility may have for implementing efficiency programs, have not been established for interruptible customers. What mechanism can be used to help utilities recover lost revenues from interruptible customer efficiency programs?
2. Equipment Types – Are programs needed mainly for central heating, ventilation, and air conditioning (HVAC) equipment in buildings housing multifamily TC customers, or are programs needed for individual units within these buildings? If programs are needed for individual units, how are these units metered for natural gas usage?
3. Budget – Would a $9 million budget be appropriate on an annual basis for multifamily TC efficiency programs for New York City? How should it be

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[36] These additional charges bring up the issue of split incentives, which is being dealt with elsewhere in this whitepaper, but does have special significance to the issue of multifamily efficiency programs.

split among the LDCs and NYSERDA? Are there other potential program administrators?

4. Conversions – Should multifamily customers converting from No. 6 or No. 4 oil to natural gas TC service be eligible for the same programs as customers who are currently served under multifamily TC tariffs? How many multifamily buildings are there in New York City that currently burn only No. 4 or No. 6 oil and do not burn any natural gas?

Staff invites comments on these issues. At the same time, we recommend that the Implementation Advisory Group (IAG) convene a special subcommittee of interested parties to begin discussion of implementation of an efficiency program for multifamily TC customers.

Split Incentives

The nature of the "split incentive" problem varies depending on the type of building and the type of commercial relationship between landlord and tenant. In the case of tenant occupied commercial buildings, particularly commercial office buildings, landlords have little incentive to invest in building system efficiency measures, because under typical commercial leases recovery of major capital investments occurs over an extended period of time (under the terms of a typical lease, pegged to the useful life of the hardware) and only the tenants realize the immediate benefits of reduced building system energy costs in the form of adjustments to baseline energy charges set at the time the lease is entered into. In the case of large multi-family residential buildings an additional element of the problem is that, typically, landlords are responsible for switching out major appliances, like refrigerators, but have little reason to purchase relatively more expensive energy efficient models because they see no immediate return on that incremental investment. Thus, first cost considerations weigh heavily in most major appliance purchase decisions. Overall, without an assurance that the party responsible for making an energy efficiency capital investment will realize a reasonable return, we cannot expect such investments to be made in the first place. A related problem rises when a landlord is able to raise rents after installing efficiency measures subsidized by ratepayers.

We are encouraged by a multifaceted effort underway in New York City to modify commercial leasing practice to better match financial returns with capital investments.[37] The City recently enacted "benchmarking" requirements for large buildings, in effect requiring owners to publicly post energy and water consumption data on a common web site. Posting of these data enables market participants to compare energy use among buildings and sensitizes owners to their position relative to competitors. Complementing the benchmarking initiative, "energy aligned" lease provisions – under which landlords would have the opportunity to more quickly recover investments in building efficiency retrofits – are being promoted by landlords, major real estate brokerage firms, City government (as a major tenant of commercial space, among other roles) and others in the industry as a means to eliminate the disincentive to landlord investment in building system efficiency measures. This solution, however, covers only a portion of the problem: it does not address split incentive issues within non-metered tenant occupied spaces. That aspect of the problem is addressed by metering, and shifting responsibility for payment of electricity consumption directly to the tenant. A recent law will require installation of meters or sub-meters in all large commercial spaces in New York City by 2025.[38]

Split incentives in multifamily buildings have proven more intractable and, in conjunction with eligibility issues, have contributed to the poor performance of multifamily efficiency programs. With the EEPS portfolio now in place, it is a priority to resolve issues related to multifamily buildings, and we invite comment on methods of addressing split incentives in that sector.

Large Commercial/Industrial Customers

Large commercial and industrial customers have argued that they should be allowed to design their own efficiency programs and bank their surcharge payments to fund such self-designed programs.

Such a program has potential benefits as well as potential drawbacks:

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[37] The effort to establish energy-aligned commercial leases in New York City is described in detail in PlaNYC 2030 and can be accessed at: http://www.nyc.gov/html/planyc2030/html/about/ggbp.shtml#more**.**

[38] Number 88, Local Laws of the City of New York for 2009.

- It could provide large, complex facilities the opportunity to tailor projects to their own needs, where standard-offer programs might not meet specific needs.
- It could provide, for participating customers, an efficient one-for-one relationship between surcharges paid and benefits enjoyed.
- It would have mixed impacts on class equity; a precise dedication of funds to projects within a class would prevent that class from subsidizing others; however, if other classes are not afforded the same option, they do not receive the same protection.
- It is not clear that the surcharge contributed by any given customer would be sufficient to fund an effective efficiency project.
- Participating customers might use surcharges to fund projects that would have been undertaken in any event.

Other states, including Minnesota, New Mexico, North Carolina, and Wisconsin, have adopted similar initiatives. We encourage comments on the experience in these states. We also invite comments on the points described above, and on any other aspect of the proposal for self-designed programs.

Cost Recovery

Since the Commission first approved EEPS programs, cost recovery from ratepayers has preceded the achievement of the benefits associated with the various EEPS program measures. For example, a CFL bulb may have a lifetime of 7 years, and the expected benefits of the measure are accounted for over the entire life of the measure. Under the current cost recovery scheme, however, ratepayers pay for the CFL in the first year, and do not realize the full benefits until several years have passed. This cost recovery method of allowing utilities to expense EEPS costs is the most common cost recovery method used in New York and other states that have significant demand side management programs.

As an alternative, EEPS costs could be amortized and recovered over a longer period of time, similar to the way other utility investment costs are recovered (through the creation of a regulatory asset). To implement an amortized recovery of EEPS costs, there are certain variables that would need to be decided upon. The Commission would need to determine specifically what EEPS expenses are eligible, what the appropriate amortization period should be

and what return should be allowed. For example, program administration costs could be expensed, while incentives could be amortized. Also, while the efficiency resource lives vary, an average life could be assumed for simplicity, or measures could be grouped into similar life categories. The interest rate on the amortization could be the same as allowed for traditional T&D investments or could include an incentive adder that is linked to actual achievement.

Advantages of Extended EEPS Cost Recovery

- Allows efficiency expenditures to be treated on a basis equal to investments in transmission, distribution and generation
- Can be used to provide financial incentives to the utility that can be tied to performance
- Provides more efficient price signals by aligning the costs and benefits
- Eliminates intergenerational inequity caused by expensing EEPS program costs
- Minimizes bill impacts as programs are expanded

Disadvantages of Extended EEPS Cost Recovery

- Utility may perceive the amortized cost recovery as too risky, even more so if recovery is tied to performance
- If not tied to performance, utility may have an incentive simply to spend to earn a return
- Utility's debt rating and ability to issue debt could be impacted if efficiency investment becomes a significant portion of the rate base
- Investors may perceive efficiency as a less secure utility asset
- Increases the overall cost of the program

We invite comment from interested parties on this issue.

Participant Eligibility

In addition to interruptible gas customers, numerous types of customers are exempt from paying the SBC surcharge, and thus are ineligible to participate in EEPS programs. Exemptions may stem from different causes including economic development zones, specific utility tariffs, and relationships with the New York Power Authority (NYPA). NYPA customers may be partially liable for SBC surcharges. In the case of partial payment customers, there

appears to be inconsistency in the manner in which different utilities define eligibility for EEPS programs. The need for NYSERDA to make similar determinations across multiple utility service territories increases confusion and the potential for inconsistent eligibility criteria to be applied to the same customer by different program administrators. This in turn impairs program outreach efforts and creates confusion for customers and program contractors.

This situation exists not only for the EEPS programs but also with respect to the Renewable Portfolio Standard and the System Benefits Charge programs. Staff recommends that a study be conducted with the goal of establishing consistent statewide standards for eligibility for program participation.

National Fuel Gas – Conservation Incentive Plan

The Commission first approved National Fuel's Conservation Incentive Plan (CIP) on September 20, 2007 with an annual budget of $10.8 million for a 2007-08 program year.[39] The CIP was included as part of a general rate filing and continues to operate independently from EEPS, although through successive changes, CIP programs are closer to conforming with EEPS programs with similar measures, reporting requirements (including compliance with the guidelines developed by the EAG), compliance with the Technical Manual and setting measurement and evaluation at five percent. The Commission approved National Fuel's CIP for a fourth year in November 2010 with an annual budget of $10,040,000 for the 2010-11 programs year, twelve months ending November 30, 2011.

The most significant difference between CIP and EEPS is that EEPS establishes saving goals for the individual programs while the CIP does not have established energy savings goals, and CIP used deemed savings for installed measures up to December 31, 2010. On January 1, 2011, CIP started reported its energy savings per the Technical Manual. In addition, the Commission also requires National Fuel to report data concerning its ongoing pre and post installation consumption, and to include the zip codes of all completed projects in its annual report.

The Commission has established that interim programs such as National Fuel's CIP will remain in operation until they are specifically superseded by a subsequent order, and

[39] Case 07-G-0141, National Fuel Gas Distribution Corporation – Rates, Order Adopting Conservation Incentive Program (issued September 20, 2007).

that such an order might have the effect of continuing the interim program in substance, or might have the effect of terminating the interim program.[40] The schedule of the current phase of this proceeding and expiration of National Fuel's CIP on November 30, 2011 provides a timely opportunity for an orderly transition from the interim programs to an EEPS program without a significant disruption of services for customers or trade allies. The Commission should consider whether or not the CIP program, in whole or in part, should be incorporated within the EEPS portfolio upon expiration of the currently authorized program.

PROGRAM MANAGEMENT

Administrative Flexibility

At its June, 2011 session, the Commission adopted various measures to increase flexibility in the administration of Energy Efficiency Portfolio Standard (EEPS) programs. These revisions to current practice will substantially increase the flexibility of program administrators.

The first measure organizes all EEPS programs into 27 classification groups. Within each Classification Group, a list of eligible measures will be maintained. In administering a program within a Classification Group, a program administrator will have flexibility to offer any measure on the list of energy efficiency measures established for the Classification Group, subject to pre-screening of measures for cost-effectiveness.

The pre-screening analysis will be performed by the program administrators for all measures and will be documented in records available for audit by Staff. If Staff has concerns about the cost-effectiveness of a measure and the difference cannot be resolved, either party may refer the issue to the Commission for resolution. Pre-screening is not required if the measures fall under the multifamily "extremely low cost or incidental" exemption from Total Resource Cost (TRC) analysis.

With respect to rebate/incentive levels for specific measures, the Commission has in many instances approved levels on a measure-specific basis. For custom measures, the Commission has not approved specific rebate/incentive levels. For "Fast Track" residential electric and gas heating, ventilation and air conditioning (HVAC) appliance rebate programs, the Commission has mandated the use of uniform rebate levels on a statewide basis. The previous

[40] 2009 Gas EEPS Order at 22.

rule was that all program administrators were allowed to make adjustments in energy efficiency program or measure rebate/incentive levels of up to plus or minus 20% of Commission-approved levels, upon certification by the Director of the Office of Energy Efficiency & Environment. This rule has been modified so that no approval is required for any decrease so long as the decrease is applied similarly to all customers. The previous rule was also modified so that the downward 20% cap is eliminated, i.e. there is no limit on downward adjustments. These changes apply to the "Fast Track" residential electric and gas HVAC programs as well.

The OEEE Director is authorized by the Commission to make substantive consensus modifications to the Technical Manual to improve the accuracy and appropriateness of the standardized energy savings estimates. These consensus changes would be made with notice to the members of the IAG and the EAG; if any member objects in writing to a particular change, the change would not be implemented except upon action of the Commission.

The combined effect of these provisions should substantially increase the flexibility of program administrators in managing EEPS programs.

Year to Year Budgeting

Program administrators and contractors have expressed concern regarding the annual nature of program budgets, and the ability to roll uncommitted or unspent money from one year into the subsequent year.

In the December 2010 Order,[41] the Commission stated:

> The combined approved annual program budgets for 2009-2011 will support each utility's efforts to reach the 2009-2011 targets. Calendar year targets shall thereafter be in effect for 2012 and beyond. …This decision to further combine the targets gives full credit to over-performance within 2008-2010 as credit towards 2011 targets. As the programs mature, they should be modulated so that annual performance matches the annual targets more closely.[42]

This effectively resolves the issue with respect to programs from 2009-2011. However, because current authorizations expire on December 31, 2011, the Commission should

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41 Cases 07-M-0548 and 08-E-1003, *Energy Efficiency Portfolio Standard (EEPS)*, Order Combining Incentive Targets, Clarifying Incentive Mechanism Details and Establishing Implementation Advisory Group, issued December 21, 2010.

42 Case 07-M-0548, *et al*, December 2010 Order at 13.

address this issue for the future so that program continuity from year to year is not disrupted, and fluctuations in expenditures from year to year are taken into account.

A distinction should be drawn between calendar year budgets for program implementation, and calendar year targets for purposes of incentives. For the reasons stated in the Incentives Order[43] and confirmed in the December 2010 Order, utilities should still be accountable for performance on an annual basis.[44]

We recommend that both spending and MWh savings be accounted for on a commitment accrual basis, i.e. both the spending and the saving should be counted in the year in which the spending is committed. Unspent and/or uncommitted cash should roll over from year to year, so program administration can be performed without interruption and contractors are not constrained by calendar year deadlines. The only constraint on rolling uncommitted funds into the next year's budget would be the final authorization date of December 31, 2015.

A sample of this method is as follows:

\$100 budget for year 2012	100 MWh target for year 2012
\$100 budget for year 2013	100 MWh target for year 2013
\$100 budget for year 2014	100 MWh target for year 2014
\$100 budget for year 2015	100 MWh target for year 2015
2012: \$75 in newly accrued/committed rebates through 12/31/12; \$50 actually paid out; 75 MWh's accrued toward target. Incentives calculated at 75 of 100 MWh's 2012 target achieved. \$25 cash remains committed to rebates to be paid when appropriate, remaining uncommitted \$25 rolls over into budget for 2013.	
2013: \$125 in newly accrued/committed rebates through 12/31/13; \$100 actually paid out (includes \$25 from 2012 budget and \$75 from 2013 budget); 125 MWh's accrued toward target. Incentives calculated (capped) at 100 of 100 MWh's 2013 target achieved. \$50 cash remains committed to rebates to be paid when appropriate, \$0 rolls over into budget for 2013.	

[43] Incentives Order at 47.

[44] This assumes no change in the underlying incentives program as discussed below.

An additional issue is presented where a program is outspending its budget for a given year. Presumably most programs that are exhausting their budgets are doing so because they are successful, and allowing such programs to borrow from future year budgets would allow them to continue uninterrupted. In the case of a successful and cost-effective program, this will normally be a desirable result.

It will not always be true, however, that exhaustion of an annual budget indicates a successful program that should be allowed unlimited borrowing from future budgets. In some cases, exhaustion of the annual budget may occur simply because customer incentives or rebates are set too high. In other cases, a utility may be driven by shareholder incentives to create an unbalanced portfolio by overemphasizing a given program. Even where shareholder incentives are not involved, portfolio imbalance remains a concern.

Moreover, borrowing from future budgets creates a risk of programs outrunning their revenue streams. Surcharge collection must be coordinated with program commitments so there is no risk of net program commitments that are not supported by authorized surcharges. To accomplish the central goal of allowing successful programs to continue uninterrupted, we recommend that program administrators should be authorized to borrow funds from future budget years subject to the following restrictions:

(1) the Director of OEEE must be notified of intent to exceed the annual budget for a program four weeks in advance (a refinement should be crafted for minor end-of-year exceedances); (2) the program administrator must have analyzed whether extraordinary spending levels are driven by customer incentives that are too high, including comparison with incentives for similar programs run by other program administrators; (3) subject to such filing and analysis, a program may be overspent by 20 percent per year; (4) with the concurrence of the Director of OEEE, a program may be overspent by more than 20 percent per year; and (4) in aggregate for electricity or for gas, a PA's EEPS annual budget may not be overspent, except that with the concurrence of the Director of OEEE, aggregate spending may increase to 110 percent, provided that the program administrator has presented a plan for restoring aggregate spending to no more than 100 percent by December 31, 2015, which plan must demonstrate maintenance of a balanced portfolio; and (5) each program administrator will notify the Director of OEEE when aggregate spending for a budget year reaches 80 percent.

Program Administrator Overlap

Each utility program administrator operates within its service territory. NYSERDA, however, operates more broadly, with almost all of its programs statewide. As most energy efficiency programs deal with measures selected from a common palette (lights, motors, pumps, air conditioning, heating, etc.), some overlap, at least at the level of individual measures, is inevitable.

It is not uncommon for a utility program administrator and NYSERDA both to consult with the same customer and offer incentives for the same measures. The customer generally opts for the highest incentive to do the work – i.e. the option that is more expensive for utility ratepayers paying the surcharge. In this respect, competition among program administrators may not result in the least cost to ratepayers as a whole. Moreover, having two program administrators spend resources courting the same customer only to have one make the sale and the other fail results in higher overall administrative costs, which comes at the expense of program resources.

One approach that has been suggested is to draw the lines between NYSERDA and utility program administrators so cleanly that there will be no overlap. This is not a promising approach. As mentioned above, most energy efficiency programs draw on a common palette of energy efficiency measures. While a utility might offer a rebate for a specific measure and NYSERDA a "deep savings" approach seeking to promote multiple measures, often both programs address the same energy issue (e.g. an inefficient lighting system) with the same solution (new lamps, fixtures and controls). For example, NYSERDA's Home Performance with Energy Star program offers numerous measures in a "whole house" approach. Some of the measures offered by NYSERDA will be duplicated by utility programs, which will tend to focus on the higher-value measures. In the absence of cooperation, this situation can be self-defeating, as neither utilities nor NYSERDA have an incentive to identify for customers the availability of the others' programs. Moreover, where utilities are able to take credit for the higher-valued measures, it becomes more difficult for NYSERDA to implement a whole-house program with the customer. A cooperative approach can eliminate these obstacles and increase both the total number of customers served and the total amount of energy-saving measures implemented.

With the elimination of overlap between NYSERDA and utility program administrators impractical if not impossible, higher levels of collaboration and coordination appear to be the most productive approach for reducing the waste of program overlap. NYSERDA has engaged in discussions with some program administrators to coordinate programs, and some coordinated programs have been launched. One approach that has been used is to engage in joint marketing and then allocate market share, by customer size or some other readily definable metric. Other approaches are possible. In the continual reassessment and improvement of the EEPS program, it should be a priority to encourage joint program marketing and/or joint program administration to eliminate duplicate expenditures seeking customers.

Implementation Advisory Group

The EEPS portfolio includes over 100 individual programs run by NYSERDA and multiple utility administrators. Starting with a competition that drew over 160 proposals, these programs were launched over an extended period of time. In approving these programs, the Commission was drawing many utility program administrators back into the business of running energy efficiency programs after a gap of almost two decades. Meanwhile, the Commission was embarking on a program of rigorous evaluation, monitoring and verification coupled with standardized calculation of savings and routine reporting and a new utility shareholder incentive concept.

With multiple programs, multiple program administrators, multiple start dates, new processes and procedures, and a host of details to resolve, the need for increased cooperation among program administrators has become apparent. To address this need, the Commission chartered the Implementation Advisory Group (IAG).

The IAG was envisioned as dealing with program administration issues at three levels. First, it is intended to act as a forum where program administrators can discuss and resolve issues for which the Commission has already delegated to them the authority they need. An example might be where NYSERDA and a utility offer incentives at different financial levels in the same territory for essentially the same energy efficiency measure. The Commission has authorized program administrators to adjust their incentive levels within limits. In many cases, the discrepancy in financial incentive levels could be bridged by adjustments by the two administrators. A discussion between the two administrators could resolve the issue. Holding this discussion in the presence of all program administrators, however, assures that while

resolving their issue the two administrators don't cause an unforeseen problem for some other administrator.

Second, the IAG can serve to provide input to decisions where the Commission has delegated authority to OEEE. Having a readily available forum to obtain input and discuss issues can significantly assist OEEE in making more informed judgments.

Third, the IAG can coordinate program administrator petitions to the Commission on those issues that by prior order or by their nature require Commission action. There are a number of issues where program administrators find it necessary to petition the Commission for a decision. For the Commission to receive a number of petitions on the same issue from multiple program administrators creates needless complication and delay. Developing a common petition and a thorough discussion of options can lead to more comprehensive and better informed Commission decisions with the expenditure of less time and effort by all parties.

The IAG is composed of DPS staff and representatives of all the program administrators. It is chaired by the Director of OEEE. Unlike the Evaluation Advisory Group, it does not include outside experts; rather it consists solely of those directly involved in program administration.

When a particular subject arises for which a detailed examination is needed (for example, the impact of new federal lighting standards on EEPS programs), the IAG forms an *ad hoc* subcommittee to address the matter. Led by a member of the IAG, each subcommittee may involve program administrator staff who do not routinely participate in the IAG (*e.g.* the company's lighting technology expert) and outside technical experts. Each subcommittee reports its work back to the full IAG.

Continuous improvement of EEPS over the life of these programs will require communication among the Commission, DPS staff and all of the program administrators. The IAG was created with the need for this linkage in mind. Meeting monthly, with subcommittees conducting necessary work between meetings, the IAG is positioned to raise and discuss issues, resolve those within its members' control, work with OEEE on issues delegated to it, and bring issues to the Commission in a coordinated, cohesive fashion.

With a broad portfolio of programs and continually changing circumstances that impact program performance (markets, available technologies, codes and standards, etc.), the

routine, on-going operation of the IAG is well positioned to provide OEEE and the Commission with the input from program administrators that they will require.

As discussed below, the threat of negative adjustments pursuant to the shareholder incentive mechanism has tended to dominate the work of the IAG to date, and has impaired what should be its more valuable functions. Adopting our recommendations with respect to incentives will remove a major obstacle to effective operation of the IAG.

UTILITY SHAREHOLDER INCENTIVES

Background

On August 22, 2008, the Commission issued its Order Concerning Utility Financial Incentives ("2008 Incentives Order).[45] The Order established maximum adjustment amounts for electric utilities, based on a rate of $38.85 per megawatt-hour. This figure was derived from an estimate of 20 basis points on the return on equity of the state's utilities.

The purposes for establishing incentives were to motivate utility management to adopt efficiency as an important priority, and to hold utilities accountable for their performance. The Order determined that utility risk and opportunity should be symmetrical, and established thresholds under which the utility's maximum positive adjustment could be earned by meeting 100% of its MWh targets, and the maximum negative adjustment would be incurred by meeting only 50% of targets.

The 2008 Incentives Order acknowledged that, "It is difficult at this early state to predict with precision the ability to meet the ambitious program targets."[46] For that reason, the Order stated, "our incentive policy will begin at modest levels."[47]

The 2008 Incentives Order applied only to electric utilities, and was not optional. In the process supporting that Order, a majority of utilities supported institution of an incentive mechanism, although there was a range of opinions as to the optimal method of doing so.

The 2009 EEPS Gas Order established an incentive program using the same mechanisms adopted in the Incentive Order, based on a rate of $3.00 per incremental Mcf. The

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45 Case 07-M-0548, *supra*, Order Concerning Utility Financial Incentives, issued August 22, 2008.

46 Incentives Order at 35.

47 Id.

principal difference in the Gas Order was that each gas utility was given a one-time option whether or not to participate in gas efficiency incentives. The only utilities that chose to opt out of the gas efficiency incentives were Central Hudson, National Fuel Gas, Corning and St. Lawrence.

On December 21, 2010, the Commission issued an Order (the "December 2010 Incentives Order") revising the manner in which incentives would be calculated and addressing various other issues related to incentives.[48]

The initial Incentives Order determined that revenue adjustments would be calculated on an annual basis. This decision has been revised twice, with the result that incentives for the years 2009-2011 will be calculated on a combined basis. This action was caused primarily by the unanticipated amount of time required for approval and roll-out of programs.

Because the incentive calculations have been consolidated, at this point there is no definitive analysis of utility experience with incentives. Based on progress updates such as those presented in this report, and based on informal discussions with utility management, it is apparent that most if not all utilities at this point are facing substantial negative adjustments.

If widespread failure to meet targets is being caused by factors beyond the control of utilities, it can be argued that negative incentives should be adjusted accordingly. On the other hand, the incentive mechanism was not intended to be resolved on a *post hoc* basis by weighing potential causal factors and making judgments about extenuating circumstances; it was intended to be calculated strictly based on objective results. This is partly due to concerns of resources and efficiency, given the difficulty of making such determinations. But it is also due to the fact that a utility's performance will always, to some extent, be affected by utility management decisions that are not accessible to our analysis.

Despite these concerns, in light of the severe nature of the economic downturn combined with other factors, Staff recommended, and the Commission adopted in the December 2010 Incentives Order, limited revisions to the incentive mechanism in recognition of three factors beyond the utilities' control:

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[48] Case 07-M-0548, Order Combining Incentive Targets, Clarifying Incentive Mechanism Details and Establishing Implementation Advisory Group, issued December 21, 2010.

1) Because program approvals were delayed, targets for the individual years 2009, 2010, and 2011 have been consolidated, and scaled to the date of program approval;
2) Utilities will have the opportunity to demonstrate on a program-by-program basis that economic factors have impaired their ability to achieve targets; and
3) A process has been established to consider whether revisions to the Technical Manual require revisions to individual program targets.

Concerns With Incentives in the Context of the EEPS Program

The Incentives Order identified a theoretical approach to incentives and stated that, with respect to EEPS, a cautious implementation path would be taken, until more experience had been obtained.

The Commission's intent, in establishing incentives, was to motivate utility management and hold utilities accountable. The first of these purposes has unquestionably been served; however, there are indications that incentives may be driving utilities toward behavior that is counterproductive to the overall goals of the program. These concerns, derived from practical experience over the past three years, are enumerated as follows:

Incentives Have Caused Utilities To Aim Low

Throughout the initial review of EEPS program proposals and in subsequent interactions, the utilities have sought to lower expectations for their performance. Setting the bar as low as possible reduces the risk of negative adjustments. Discussion of ambitious programs and aspiration to higher goals is almost entirely eclipsed by risk avoidance.

One source of the delay in program approvals, arguably, is that the existence of financial incentives induced utilities to underestimate the targets in their proposals, to increase their chances of earning incentives. This, in turn, greatly increased the amount of Staff time needed to analyze the proposals, and in many cases the Commission substantially revised the targets for utility programs. Utilities now argue that it is unfair to hold them to targets imposed by the Commission rather than targets proposed by utilities.

The Presence of Incentives Undermines the Working Relationship between DPS and the Utilities

The Technical Manuals were created to provide a uniform, solid basis for estimating the energy savings accruing through various energy efficiency measures. It would be productive to have cooperative discussions on how accurate these calculations are, in order to provide the Commission and the NYISO with the most accurate estimates possible of what the impact of EEPS will be.

Incentives, however, cause these discussions to be adversarial in nature. Discussions center on how any changes in calculations affect the utilities' ability to meet their targets and avoid negative revenue adjustments. The utilities have a strong incentive to argue, not to make the calculations more precise, but to make them as optimistic as possible so that the utilities receive maximum credit per measure. A disconnect between the purpose of DPS staff (to make the calculations as accurate and realistic as possible) and the purpose of utilities (to make the calculations as optimistic and supportive of avoiding penalties as possible) results. The relationship between DPS staff and utility staff, while professional, tends to be somewhat combative on this issue, and this colors all other working relationships between Staff and utilities.

Incentives Impede Partnerships Between NYSERDA and Utilities

Any discussion of a potential collaboration between NYSERDA and a utility always runs into the issue of how the credit for energy savings will be divided.[49] Even when utilities are given a share of the savings for, e.g., making referrals to a NYSERDA program, they have to question whether their staff time would produce a larger impact on avoiding penalties if spent in other ways – regardless of the overall efficiency savings that might be produced by the referrals.

A common practice among utilities is to award field staff bonuses for meeting energy savings project targets. This is a business arrangement which, in theory, stimulates utility employees to advance the goals of the EEPS program. In practice, individual incentives for field staff have rendered cooperative ventures ineffectual.

Drawing a hard line between NYSERDA and utility programs will result in suboptimal performance of many programs. A NYSERDA "whole buildings" program, for

[49] NYSERDA is not subject to the incentive program.

example, will inevitably involve technologies covered by utility rebates on lighting, water heating, space heating, air conditioning or other technologies. An impediment to collaboration between NYSERDA and utilities is a serious barrier to effective implementation of these important programs.

The Timing Of Commission Decisions on Incentives and Utility Business Decisions Driven By Incentives Does Not Match

As currently ordered, the incentive program requires utilities to report their progress against targets through the end of 2011. These reports will be submitted in March 2012, published under SAPA, reviewed, and acted on by the Commission in mid 2012. The Commission's decision may include adjustments based on the impact of Technical Manual changes, the economy, and possibly other factors. Utilities, however, have to make operational decisions in the near term in an attempt to avoid negative revenue adjustments. These decisions cannot assume that the Commission will reduce or eliminate negative adjustments based on extenuating circumstances. Utility managers will be prone to assuming the worst case scenario, and making their program decisions accordingly.

Incentives Can Cause Utilities to Make Decisions That Help Meet Targets, But Override Other Commission Concerns

Utilities have a strong incentive to shift staff resources away from underperforming programs into programs that will help the utility avoid negative adjustments. This is not, on its face, a bad thing, to the extent it moves resources out of less effective programs and into more effective programs. However, where the utility's decision is driven purely by incentives, broader program goals might not be served by these actions.

First, an incentive-driven decision might not take into account the reasons for a particular program's underperformance. For example, it may be that a particular program could become high-performing if more staff resources were added, or if time were spent revamping the program, or if a cooperative approach with NYSERDA were adopted; but the immediate need to avoid negative adjustments militates strongly against time-consuming exercises in problem-solving.

Second, even where a program is inherently less effective than others, it often will not serve the broader policy goals of EEPS for that program simply to be abandoned. It is obvious that some sectors produce more energy savings per dollar spent than others.

Commercial and industrial programs tend to generate more savings than residential or low income programs. If the Commission had sought the maximum energy savings return on its investment, it would have dropped low income programs, dropped most residential programs, perhaps excluded some technologies and focused solely on a narrow range of commercial and industrial activities. The Commission did not do so. It created a comprehensive and balanced portfolio of programs and exhibited great concern for the balance of program availability and collections by sector. The incentive program encourages utilities – and in at least one case has clearly caused a utility – to override that Commission objective.

Preoccupation with Avoiding Negative Adjustments Blocks Consideration of Other Benefits of Efficiency Programs

Efficiency programs can benefit utilities in a variety of ways: improving customer relations and deferring the need for new infrastructure being foremost. In Staff's experience, the only priority driving utilities is the avoidance of negative revenue adjustments. Using the Implementation Advisory Group meetings as a gauge, there is very little of the kind of discussion that should be happening – exchange of information on what programs are working best, how programs can be run better, what can be learned to be more effective. Instead, the discussion revolves around incentives and their consequences.

Incentives May Be Duplicative

Where a gas utility already has incentives to convert customers from oil to gas heat, HVAC efficiency programs that support shareholder incentives can provide an unnecessary duplicative layer of incentives.

Options

In deciding on the treatment of incentives, the Commission should reconsider the terms of the December 2010 Incentives Order with respect to incentives covering 2009-2011, as well as considering a revised policy for incentives for 2012-2015. Pros and cons of several options are discussed below.

Waive all incentives, negative and positive, for the years 2009-2011. Utilities argue that the provisions of the December 2010 Incentives Order will not prevent an unfair application of negative adjustments, because they are being held to targets recommended by DPS staff rather than targets that they proposed. Moreover, they argue that the achievement of targets is not measured with metrics they proposed, but with different metrics that have been subject to

further modifications as the Technical Manual evolved. Staff is also concerned that, because the results of these provisions will not be known for some time following the end of 2011, they will not prevent the situation where the utilities make program and resource decisions solely to avoid potential negative adjustments for 2011.

Against these arguments is the fact that the incentive mechanism contains symmetrical risks and rewards, each of which could be affected by factors outside of utilities' control. Had the economy boomed and caused high performance of EEPS programs, or had targets been set too low, it is unlikely that utilities would argue their positive incentives should be waived.

Apart from issues of fairness, however, we are concerned that the time, effort, and adversarial positioning entailed by the implementation of the December 2010 Incentives Order will disrupt the more important task of improving programs going forward. Calculating incentives, while debating and accounting for numerous mitigating factors, will tie up Staff and utility time that is much better spent on managing program implementation.

It is possible that one or more utilities may complete 2011 with a claim for positive incentives. If so, the Commission may inquire whether the positive results were achieved by a shift of program resources, resulting in an unbalanced portfolio. The Commission has already provided for a consideration of that possibility.[50]

Eliminate incentives throughout the 2009-2015 period. This option would continue the first option through the next phase of EEPS, recognizing the problems that programs have encountered due to counterproductive effects of incentives. It is desirable, though, to maintain some form of encouragement of utility performance. One possibility would be for the Commission to routinely call attention to superior or inferior performance during its quarterly reviews of EEPS program performance. It is also possible that some of the other alternatives discussed here could be combined in an effective way without producing the disruptive impacts that we seek to avoid.

Refine the program targets. In this option, the incentive program would remain intact but the program targets would be revised. Target revisions would account for (a) Technical Manual changes; (b) a one-time shift in target dates to account for time lags and the

[50] 2008 Incentives Order, pp.43-44.

effect of the poor economy; and (c) program by program issues as identified by utilities. This option would leave the fundamentals of the incentive program intact, while avoiding a significant portion of the retrospective review that would otherwise be required by a detailed analysis of economic and time lag factors. On the other hand, this approach would not be free of contention; it would not resolve the conflict between the Commission's need to have the most accurate and cost-effective targets possible and a utility's desire to set targets as low as possible and also have the most optimistic estimates of achievements.

Establish positive incentives only. This approach could be taken for the 2009-2011 period, the 2012-2015 period, or both. It would address utility arguments of unfair negative adjustments without removing the incentive for utility performance. Any positive incentives claimed for the 2009-2011 period are likely to be relatively small. Applied to the 2012-2015 period, this approach would fail to resolve some of the disruptive impacts of incentives we have described, but it might have a mitigating effect on the worst of those impacts.

Calculate 2009-2011 incentives on a curve. To eliminate the need for calculating economic effects, incentive adjustments could be made on a curve based on utilities' performance relative to one another, as opposed to the their actual savings achieved. Implementing this option would be contentious, and the possibility of this method being used in the future would impair cooperation among program administrators.

Use a simpler metric for calculating incentives: This option would change the metric for performance to something that can be measured in a more clear-cut and timely way. For example, rather than attempting to measure the energy savings from installing a certain number of energy efficient water heaters (with the complexities of ascertaining the age and efficiency of what is being replaced and other variables in calculating savings) incentives could be based solely on the number of measures installed. Calculating the basis for shareholder incentives would be a matter of counting how many water heaters were installed compared to an initial target number. This approach is simpler; it ties incentives directly to utilities' performance as opposed to the savings resulting from that performance. The approach also has drawbacks. As with some other alternatives, it does not eliminate the potential for disputes about what the targets should be for a given program. The terms of the debate would be altered, but the fundamental dynamic would be unchanged. Also, translating the number of measures installed into reliable estimates of actual energy savings, particularly in projects involving

multiple, interacting measures, will be no less complex than the current approach. The same data collection and effort will be required.

Calculate incentives on a service territory basis: If incentives were calculated based only on savings achieved in a territory, without regard to whether they were achieved by NYSERDA or by the utility, many of the issues involving program overlap and lack of cooperation could be more easily resolved. On the other hand, this proposal taken by itself would not address many of the other problems with incentives that we have identified. Also, it presents the risk that a utility could perform poorly but be rewarded based solely on work performed by NYSERDA.

Set incentives on varying bases: In the context of terminating the existing incentive mechanism, utilities could be asked to propose incentive mechanisms unique to their circumstances. For example, one program administrator has suggested that shareholder incentives should be set on the basis of capital expenditures deferred or eliminated by energy efficiency programs, not on the performance of operating the energy efficiency programs themselves.[51] Considering and implementing utility-specific proposals presents the risk of being highly resource-intensive.

Recommendation

Staff recommends that incentives should be eliminated for the period following 2011, subject to a reassessment prior to the end of 2012. In our judgment, the diversion of resources, disruption of program administration, and distortion of portfolio balance outweigh the benefit of the incentives. At the same time, maintaining some way of encouraging performance serves an important purpose. Prior to the end of 2012, the Commission should consider whether the utility program administrators have been able to successfully operate their energy efficiency programs without shareholder incentives or negative revenue adjustments (as NYSERDA currently does with half of the EEPS programs) or if the reinstatement of some form of shareholder incentive is advisable. During 2012, Staff can work with utility program administrators and other parties to craft a revised incentive mechanism, should the Commission

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[51] Although this proposal has not been developed in detail, it seems problematic in that it would require the same calculation of MWh savings currently required, with all attendant difficulties, as well as determinations of whether capital projects have actually been avoided, and the avoided costs of the projects.

deem such a mechanism necessary. A revised mechanism could include components of the options discussed above. In particular, the use of a simplified metric, possibly combined with the elimination of negative incentives, might provide encouragement to utilities while resolving many of the problems with the current mechanism.

With respect to the 2009-2011 period, the Commission should take immediate action, in the context of pending utility petitions, to resolve the issues of fairness in a manner that minimizes the diversion of resources needed for the task of improving programs going forward.

Commenters are encouraged to provide their views on any or all of the options listed above or to propose other approaches to maximize the performance of EEPS programs without continuing or exacerbating the unintended consequences encountered thus far.

EVALUATION, MONITORING AND VERIFICATION

The Commission has made it clear that it expects rigorous, accurate, timely and transparent program evaluation. Commission actions to support this commitment include:

- Increasing funding for evaluation by 150%
- Establishing evaluation guidelines and standards
- Forming the Evaluation Advisory Group (EAG), which represents about 25 interested parties, to advise the Commission and Staff on evaluation issues
- Endorsing a more active role for Staff in overseeing and guiding evaluation and reporting activities

Program Evaluation Results

Through May 1, 2011, Staff has received final process evaluation reports for 14 EEPS programs, draft market characterization and assessment reports for two EEPS programs and draft impact evaluation reports for two EEPS programs. By this fall, we expect to receive process evaluations covering an additional 30-40 programs and impact evaluations for 10-15 programs (including NYSERDA SBC programs).[52] A detailed summary of received and expected reports is included in Appendix 3.

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[52] Process evaluations are intended to assess program design and implementation and are also used to identify opportunities for program improvement and to track program progress. Impact evaluations quantify energy and demand savings and other potential program impacts such as environmental benefits.

The longer-than-expected times for program approval and implementation have affected the availability of evaluation results. As of year-end 2010, about 25 programs were not yet reporting energy savings. In addition, the utilities needed time to establish their internal evaluation departments and hire independent evaluation contractors.

The results to date tell us that many elements of the EEPS programs are working as expected. For example, NYSERDA's EmPower Program workshop and in-home education sessions are succeeding in their goal to influence people to energy-saving actions (e.g., purchasing CFLs and basic weather stripping). Other positive findings relate to the way in which program participants perceive the program. For instance, the NYSERDA Business Partners Program process evaluation found that vendors within the program's motors component largely viewed the program as offering a "value added" service to their customers and cited building customer relationships as both a reason for participating in the program and an outcome of program participation.

The process evaluation of National Grid's Residential High-Efficiency Heating and Water Heating and Controls Program found that, overall, customers are very satisfied with the program, citing lower energy bills, a positive experience working with the company and its contractors, and the amount of the rebate.

On the other hand, the evaluations have uncovered issues that need to be addressed, such as improving application and rebate processing, better targeting of potential customers, and increased training of program staff to improve response to customer inquiries and concerns. An example of the continual improvement concept is the Central Hudson Small Commercial Program, a program designed to provide audits to non residential customers with an electric demand of 100 kilowatts or less. This customer segment includes small businesses, local governments, not-for profits, private institutions, public and private schools, colleges and healthcare facilities. A tepid response to the program prompted Central Hudson to conduct its process evaluation earlier than usual. The evaluation concluded that the program was not meeting its objectives and the evaluation offered numerous recommendations for improvement dealing with program management, database tracking, and marketing. As a result, Central Hudson "fully restructured" the program and it is now showing significantly improved results.

Using evaluation data as a tool in a process of continual program improvement, as was done with the Central Hudson program, is our chief objective. Consistent with this

objective, the early evaluations have been insightful. For process evaluations, a key requirement is to "identify lessons learned and provide specific actionable results for program improvement." In addition, we require program administrators to include these recommendations in their quarterly reports accompanied by their response to the recommendations.

The exact timetable for completion of evaluation results is dependent on a number of factors but is often strongly driven by the number of program participants and the time required for installing specific measures. For example, for a program targeting new commercial sector construction, it is not unusual for two or more years to elapse from the initial program application to full project completion because of the complexity of the new construction process (e.g., design issues, building permits, construction delays because of weather). For other programs, such as those targeting residential furnaces/boilers, installations are not especially time consuming and peak customer activity clusters around the heating season.

Ultimately, there must be sufficient data to produce meaningful results. For some types of impact evaluations, evaluators seek energy consumption data for a period of about 12 months *before* the installation of a measure and for about 12 months *after* the measure is installed. While process evaluation can be conducted much earlier in the program cycle, it often makes sense from a statistical standpoint to wait until the population of completed projects is large enough in order to increase the opportunity to select a sample that is truly representative of a cross section of participants.

Evaluation Guidelines and the Evaluation Advisory Group

The focal point of efforts at the outset of the EEPS program was to build a solid foundation to meet the evaluation challenges of the expanding scope of the EEPS program portfolio. Poor planning, data collection and oversight can cause even the most advanced and proven methodologies to fail. Accordingly, we began by encouraging an open discussion of evaluation issues among the key parties (e.g., program administrators, evaluation experts) and establishing clear evaluation guidelines, including a roadmap for collecting the data necessary to conduct first rate analysis.

As provided in the 2008 EEPS Order, Staff produced the Evaluation Guidelines in August 2008. These guidelines put evaluation standards in place and offer a direction for producing quality evaluation and oversight for the complete range of EEPS programs. Anticipating the diversity of the EEPS program portfolio, we rejected a "one size fits all"

approach and crafted guidelines that balance tough standards with the flexibility to permit evaluators to use the most reliable, practical and cost-effective methodologies. For example, Staff set the accuracy target for customer surveys and estimating program energy savings at the 90/10-confidence/precision level. 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. On the other hand, this is a rigorous standard that, depending on the program type and population size, can prove impractical or too costly to achieve.

It is also important to assess the value of the data in the context of its overall importance to the evaluation effort. Cases where we would expect adherence to the highest evaluation standards and the greatest frequency of evaluation would typically include programs:

- Providing expensive infrastructure investments
- Eligible for utility incentive payments or lost revenue recovery
- Targeted for a significant budget increase
- Producing results far above or below expectations
- Being implemented on a pilot basis
- In which the cases have high savings variability
- In which there is a limited existing knowledge base
- In which the program makes a large contribution to the overall portfolio savings.

Another key component of the Evaluation Guidelines is that every proposed program must be accompanied by a detailed evaluation plan for Staff review and approval. Developing an initial evaluation plan in preparation for launching a program allows evaluators to work with program planners to identify data collection needs, establish the evaluation approach and synchronize evaluation goals with the program's performance goals. While there are many elements of an evaluation plan, the most prominent components are the process and impact evaluation strategies.

The Evaluation Guidelines were created with the active engagement of the Evaluation Advisory Group (EAG). The Guidelines will be revised as necessary, including a major revision expected to be issued in July 2011.

The 2008 EEPS Order established the EAG to serve as a vehicle for communication and cooperation among program administrators, Staff, and other interested parties on critical evaluation issues. The EAG also includes organizations active in energy efficiency programs but not under the Commission's jurisdiction. For example, the current EAG membership includes the New York Power Authority (NYPA), the Long island Power Authority (LIPA), the New York Independent System Operator (NYISO), several state agencies, the City of New York and many environmental and business related groups.

We have engaged an independent evaluation contractor to serve in an advisory and research capacity for Staff and the EAG. This evaluation firm has experience in multiple states and multiple program types, to provide have an understanding of the latest evaluation data and methods from outside New York.

The EAG has engaged in a number of activities beyond the Evaluation Guidelines. For example, the EAG has provided feedback to refine and update the Technical Manual. In addition, the EAG plays a prominent role in developing the EEPS monthly, quarterly and annual progress reports as well as in establishing data collection protocols for evaluation purposes. A prime objective of our reporting efforts is to collect data that can serve as an "early warning" to Staff when programs are deviating from their goals. A second key objective is to maintain a list of data elements that are commonly needed for evaluation activities and program oversight activities, information such as the exact type and date of measure installation. These data are not regularly reported, but are routinely collected by the program administrators. A longer range objective is to create a centralized reporting data base system to help Staff monitor program progress and make key data, including evaluation reports, readily available to policy makers and the public via the internet. This system is anticipated to be in place by early 2012. Reporting protocols are currently being reviewed by both the EAG and the recently established Implementation Advisory Group (IAG).

Another important EAG related activity is to explore ways of better coordinating evaluation activities to avoid duplication of effort and increasing the overall effectiveness of the evaluation process. For example, most of the program administrators agreed to conduct a joint impact evaluation of the gas furnace rebate programs. A scope of work has been drafted and the logistical details are under discussion. This coordinated approach has the potential to result in a more accurate sample, more reliable results and lower costs.

Staff Review of Evaluation Plans

Staff plays a major role in reviewing, not only the evaluation plans, but the key evaluation deliverables such as survey instruments, sampling plans, logic models and draft reports. Staff needs to ensure that each evaluation is being conducted in accordance with the Evaluation Guidelines, not only from a technical standpoint, but also considering factors such as organizational separation between the program evaluation and program implementation functions. Another important advantage of the review function is that we may catch and correct problems early on in the evaluation process. Often, if a problem is uncovered late in the process, it is impossible, or at least impractical, to go back and make a correction. For example, if an important question is omitted from a survey, it is generally not cost effective to administer the survey again. Flaws in the sample design can result in biased and inaccurate results.

While the quality of the evaluation deliverables has generally been good, the review process has provided recommendations that have enhanced the evaluations. Examples include:

- Expanding and refocusing researchable issues for a program targeting small business
- Adding actionable recommendations for program improvement as a key deliverable
- Enhancing the sampling strategy for several programs

It is always challenging to balance the need for oversight against the need to avoid micromanaging. As one utility evaluation contractor pointed out, other states do not examine the components of an evaluation with the same level of detail as New York, but this review notably enhances the evaluation effort.. It is our intention that, once the program administrators become more experienced with our expectations and our confidence in the evaluation products increase, the level of review will be reduced accordingly.

An EAG subcommittee is developing a priority list of the most viable studies to be conducted on a statewide or regional basis.[53] Effective and comprehensive evaluation of the EEPS portfolio should not be limited to analysis focused only on the program specific process and impact evaluation, because this approach provides an incomplete picture. It is also important to examine the broader program impacts such as assessing market dynamics (e.g., how is the market changing?), understanding the affect of emerging technologies (e.g., use of LED lighting) and monitoring product baselines (e.g., the percentage of homes in New York with high efficiency furnaces). This type of research can help support program strategy, design and implementation, and also better document program impacts.

In May, 2011 we introduced a project to develop best practices for process evaluation within New York's program portfolio. This effort will include recommendations that facilitate common approaches and increased compatibility of results among program administrators. In the near future, we expect the release of Requests for Proposals for "baseline" studies designed to provide us with a better understanding of the market saturation and potential of many of the measures currently being installed through EEPS programs. This information will help to determine remaining potential for key energy measures and allow evaluators to determine the degree to which EEPS programs have influenced the market for energy efficiency measures.

Staff are also active participants in the regional Evaluation, Measurement and Verification Forum (EM&V Forum) being sponsored by the Northeast Energy Efficiency Partnership (NEEP). The 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.

Conclusion

The EM&V program has made solid progress over the last three years, but we continue to face challenges. For example, one immediate challenge is to carefully isolate and report energy savings and to be able to determine the savings from each specific program or

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[53] It may not make sense, for example, for individual utilities to each perform their own study regarding best evaluation or program design strategies. Not only would the total cost likely be higher, but the final products collectively may not be as strong compared to the utilities and NYSERDA pooling their resources to pursue a single study with a coordinated approach.

funding source to understand and monitor our progress. When consumers are confronted with multiple energy efficiency messages and programs sponsored by federal, state, and local governments, utilities, and even retailers (e.g., Wal-Mart's environmental sustainability program), the quantification of success or failure of programs can be difficult to assess. Over time and based on all the combined influences that customers experience, it will be difficult 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 from a program of five years ago. Like the other states, New York is working on this issue. We haven't yet found a complete answer, but we are committed to do the best job possible to produce reliable evaluation results for future program design. While there is much more work that needs to be done, we are pleased with our progress. This progress is demonstrated, in part, by the fact that many other jurisdictions look to New York for leadership in this field.

OUTREACH AND EDUCATION

In the June 2008 EEPS Order, the Commission concluded that the success of EEPS programs hinges in large part on public awareness, understanding and willingness to participate, and that a new statewide outreach and education program must be an integral part of a successful EEPS strategy. The Commission provided additional funding to be collected through the System Benefits Charge dedicated to statewide outreach and education under Staff's direction. The Commission also directed Staff to address specific issues related to the development of the program, hold collaborative discussions among interested parties, convene an Advisory Group on customer outreach and education policy, and develop an implementation plan for approval by the Commission.

The process steps outlined by the Commission have been completed. These include the formation of an Advisory Group, which has met eight times and adopted unanimously a set of principles to guide the EEPS statewide outreach campaign, and the development of a program implementation plan, which was approved by the Commission at the October 14, 2010 session. The overarching goal of the statewide outreach and education program is to motivate residential, commercial and industrial customers of New York State's electric and natural gas utilities to use energy efficiently, either by participating in EEPS programs or by taking recommended do-it-yourself actions. The program serves as the platform

to integrate and support the EEPS programs conducted by multiple program administrators, including NYSERDA and New York State utilities.

Statewide Program

All of the elements of the multifaceted outreach and education program envisioned by the Commission are in place, with program introduction expected in the near future. The program is research-based, supported by the findings and insights from multiple rounds of qualitative and quantitative research. It has been received enthusiastically by the Advisory Group and other program partners. In addition, over 350 community-based organizations have volunteered to actively promote the program in their communities.

The EEPS outreach and education campaign will use the full range of state-of-the art outreach and education tools, including: (1) an interactive website for delivering the program's energy efficiency information where residential and business customers can easily identify and access energy efficiency programs available to them; proof about energy use, waste and savings; success stories from residential and business customers; and an online community to learn from other New Yorkers about ways to reduce energy waste; (2) social media to facilitate consumers' interaction with their peers to learn, receive feedback, and help establish new social norms regarding energy use; (3) a mix of TV, radio, out-of-home and online advertising to make audiences aware of their invisible energy waste; and (4) community-based outreach throughout the State to build sustainable relationships with diverse groups of community organizations to directly engage New Yorkers who are less likely to be reached by traditional advertising, do not have Internet access, or who do not rely on the Internet as an information tool. In addition to the development of these campaign elements, DPS has been working closely with NYSERDA, the State's utilities and other State agencies to coordinate our energy efficiency outreach and education efforts to ensure that ratepayer funding is used effectively and that customers are afforded one-stop shopping that gives them the information and access to programs best-suited to their needs.

The program model promulgated by the Commission in the 2008 EEPS Order has been endorsed unanimously by the Advisory Group and, moreover, the process used in its development has created a valuable collaborative framework that will continue to benefit the EEPS initiative going forward. The statewide outreach and education umbrella campaign should

be implemented and fully funded as a critical and integral component of the EEPS program in New York State.

Program Administrator Programs

In order to make customers aware of the EEPS programs that are available to them and promote participation, each program administrator undertakes program-specific outreach and education/marketing (O&E/marketing). Each of the O&E/Marketing plans complies with requirements set forth in the Commission Orders approving the applicable EEPS program. The plans are designed to reflect the characteristics of the service territory and the needs of the target audiences so that program participation goals are met in a cost-effective manner. Depending on the nature of the program, a companion O&E/Marketing plan and budget may not be needed. In those instances, as part of the review for compliance, program administrators have been responsive to Staff's questions and justified the recommended approach. After program implementation begins, Staff monitors the O&E/marketing plans through meetings, reports and ongoing dialogue, as well as through program administrator participation on the Advisory Group for the statewide umbrella campaign.

Staff's review of the O&E/Marketing plan annual reports showed satisfactory performance overall. In some cases, participation exceeded expectations and EEPS programs were temporarily suspended pending Commission approval of additional funding. In other cases, program administrators proposed O&E/Marketing plan modifications to improve effectiveness. For example, some program administrators chose to evolve multiple program-specific O&E/Marketing efforts into a more holistic, integrated energy efficiency customer communications effort to create a stronger overall presentation of program administrator EEPS programs. One area in which Staff is working with the program administrators is how best to deal with O&E/Marketing budgets as programs near full-subscription. Staff has presented a proposal asking each program administrator to review and consider making changes to the marketing activities, and corresponding shifts in budgets, based on actual results of the program in terms of participation levels. The Implementation Advisory Group generally supports this approach, and has been provided the details of the proposal. As programs near full subscription, the program administrators should consider whether marketing activities are needed and whether those remaining funds should instead be devoted to program services. O&E/Marketing reporting is another area which has evolved. A new, streamlined reporting framework is under

development, to reduce the program administrator reporting burden but at the same time maintain the consistent flow of important program information and the ability to make program changes timely and as circumstances warrant.

The inclusion of O&E/Marketing components as integral parts of individual program administrator EEPS programs is appropriate and should continue. Properly designed O&E/Marketing efforts are essential to customer awareness and understanding, which are the prerequisites to participation. As EEPS programs and corresponding O&E/Marketing programs mature, the flexibility that has been demonstrated during program introduction will enhance the overall success of EEPS program delivery to customers.

With respect to program administrator O&E/Marketing programs, we invite comment on two issues:

1) Should the percentage of program funds for O&E/Marketing decline as EEPS programs mature?
2) Should program administrators increasingly use EM&V tools to evaluate O&E/Marketing efforts?

WORKFORCE DEVELOPMENT

On June 22, 2009 the Commission authorized NYSERDA to use $6.6 million in System Benefits Charge resources to fund a workforce development program (the Workforce Order).[54] This funding was authorized on a one-time basis, with the anticipation that other funding sources would become available to NYSERDA for the continuation of the program. The main purposes of the initiative were to enhance the quality of work performed (and hence the amount and reliability of energy savings) and to remove potential bottlenecks to the timely implementation of efficiency programs.

Implementation of the Workforce Order is proceeding within the anticipated budget and, in total, is exceeding the goals detailed in the Operating Plan, as detailed in the chart below.

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[54] Case 07-M-0548, Order Authorizing Workforce Development Initiatives, issued June 22, 2009.

Program Component	Annual Budget ($)	Budget Committed ($)	Number Trained (goals) as per the Operating Plan	Anticipated Number Trained through Contracts
Career Pathways for Engaging Disadvantaged Communities	$1,250,000	$1,201,739	1,097	3,600
Technical Training	1,550,000	1,140,615	1,425	3,300
Internships/ Apprenticeships	300,000	225,000	NA[55]	
Certifications/ Reimbursements	1,095,500	133,807	2,215	397
Annual Solicitation	1,250,000	1,250,000	1,500	1,500+
Marketing	362,600	162,776	NA	
TOTALS	5,808,100	4,113,937	6,237	8,797+

To date, NYSERDA has funded 14 new training partners with expertise in worker readiness and job readiness basic skills. These partnerships are projected to provide training for approximately 3,300 individuals. Many of these participants are unemployed and on public assistance. EEPS funding has also supported 21 new training partners to expand their existing building science and energy efficiency training programs to offer technical classes to 3,600 people. Combined, these EEPS workforce training programs will deliver training to approximately 6,900 individuals.

Additionally, NYSERDA is completing negotiations on several contracts that resulted from the EEPS competitive solicitation. It is anticipated that an additional 1,500+ individuals will be trained through these contracts. It is important to note that some individuals, especially those on career pathways, may attend more than one class, by multiple providers.

[55] Students participating in internships and apprenticeships are represented in the number of participants trained and are not mutually exclusive.

EEPS funding also contributed to an additional 3,500 trainings through the NYS DOL Career Pathways Program for Disadvantaged Workers. Career Pathways programs are currently serving residents of Albany, Utica, Schenectady, Syracuse and Rochester as well as the New York City metropolitan area.

Technical training for residential efficiency programs has been provided through the Center for Energy Efficiency and Building Science (CEEBS), a network of community colleges headquartered in Troy. CEEBS served 1,275 participants during 2010. EEPS funding has supported 3 new locations in the CEEBS network to reach more participants in the North Country and the Southern Tier. Training for residential programs was also provided through the New York State Buildings Association Research and Education Foundation, and the Building Performance Contractors Association (BPCA). BPCA is delivering technical training to 100 building technicians in New York State. Examples of courses include: Designing, Constructing and Retrofitting a Low E Building; Level I Thermology; ENERGY STAR Version III for Raters; and NYS Green Building Programs for Verifiers and LEED H-Raters.

Technical training for commercial/industrial programs is provided through a range of programs including: Building Operator Certification (in partnership with CUNY Institute for Urban Systems and the Building Performance Lab); train-the-trainer efforts for the Green Professional Building Skills (GPRO) certificate program; Advanced Lighting Control Training for master electricians; partnerships with manufacturers to provide equipment used in building controls training; outdoor lighting research; and continuing education programs for incumbent professionals in the energy efficiency sector.

NYSERDA states that current sources of funding are limited in scope, and additional funds will be needed to expand and continue the initial efforts in the following categories:

- On-the-job-training programs
- Purchase of training equipment
- New and updated curriculum reflecting changes in technology
- Integration of training for commercial/industrial efficiency programs with other training programs
- Further integration of energy efficiency training with trade training conducted by unions/trades.

Consideration needs to be given to whether additional EEPS funds should be dedicated to workforce development efforts.

CONCLUSION AND RECOMMENDATIONS

Staff's general recommendation is to reauthorize the majority of the EEPS programs and to maintain surcharges at current levels, through 2015, subject to continuous reevaluation and improvement. We do not recommend a single order that addresses all EEPS issues at once. A detailed index of Staff recommendations is provided in Appendix 4.

The recommendations for action in October, 2011 are:

- Reauthorize surcharges and the majority of programs
- Reallocate funds pursuant to our analysis of "outlier" programs
- Consolidate selected programs
- Clarify rules related to year-to-year budgeting and unspent funds from previous years, to increase flexibility for program administrators
- Eliminate the current shareholder incentive mechanism

Following the immediate actions needed to maintain continuity for the overall program, consideration should be given to numerous issues as part of a strategy of continuous improvement. In this paper, Staff discusses various issues that should be considered by the Commission for action, either at the October, 2011 session or at a subsequent session. These issues include:

- Revision of the Total Resource Cost test
- Program revisions in response to the development of lighting standards
- The optimal percentage of program resources allocated to low income customers
- Methods of reducing overlap, or increasing cooperation, between NYSERDA programs and utility programs
- Providing increased flexibility for program administrators
- Expanding program eligibility to temperature-controlled multifamily gas customers
- Self-directed programs for large C/I customers
- Budgets and funding streams for Outreach and Education programs

- Alternative forms of program delivery
- Incorporating NFG's Conservation Incentive Plan into EEPS
- Revising utility cost collection to a capitalization basis
- Providing additional funding for workforce development
- A review of participant eligibility in the context of partial surcharge exemptions

APPENDIX 1

REVIEW OF RESULTS

Statewide and Individual Program Administrator Results and Forecasts

Through February 2011, approximately $226 million has been spent on EEPS program implementation and another $91 million has been committed, mostly through contracts or agreements with vendors. PAs report that electric energy efficiency measures installed will reduce average annual consumption by 1,028,879 MWhs, enough to meet the annual electricity needs of about 157,900 homes. Gas energy efficiency measures currently installed will reduce average annual gas consumption by 2,088,187 dekatherms, enough to meet the annual needs of approximately 20,000 homes.

Savings achieved, as a percentage of total targets, are running ahead of dollars spent as a percentage of total budgets. As of February 28, 2011, statewide electricity savings represented 49.1 % of the cumulative targets to date, and gas savings represented 60.3% of the cumulative targets to date, while cumulative program spending represented 38.9% of budgets to date.

Table 1 shows the cumulative statewide electric and gas energy savings acquired and expenditures through February 28, 2011. Energy savings and expenditures are also expressed in terms of percent of savings and approved budgets.

Table 1: Key Performance Metrics for Statewide Portfolio through February 28, 2011

Note: Please see updated version of this table at end of document.

		Electric Programs	Gas Programs	TOTAL
Electric Savings	Net Annual* MWh Acquired	1,028,222	657^	**1,028,879**
	Approved Net MWh Target	2,096,602	N/A	**2,096,602**
	Percent of Net MWh Target Acquired	49.0%	N/A	**49.1%**
Gas Savings	Net Annual* Dth Acquired	532,341†	1,555,846	**2,088,187**
	Approved Net Dth Target	N/A	3,461,256	**3,461,256**
	Percent of Net Dth Target Acquired	N/A	45.0%	**60.3%**
Expenditures	Total Expenditures	$ 174,504,455	$ 51,378,110	**$ 225,882,566**
	Total Budget	$ 456,108,373	$ 124,897,270	**$ 581,005,643**
	Percent of Budget Spent	38.3%	41.1%	**38.9%**

* Net Annual savings acquired in the first year after measure/project installation.
^ Four gas programs report ancillary electric savings.
† Six electric programs report ancillary gas savings.

Figures 1 and 2 demonstrate a continued ramp up of monthly electric and gas savings by quarter through 2010 and the first two months of 2011. Overall, New York utilities and NYSERDA have acquired of 49% of their combined MWh target, and60% of their combined dekatherm target, for the period ending February 28, 2011.

Figure 1: MWh Achievements through February 28, 2011

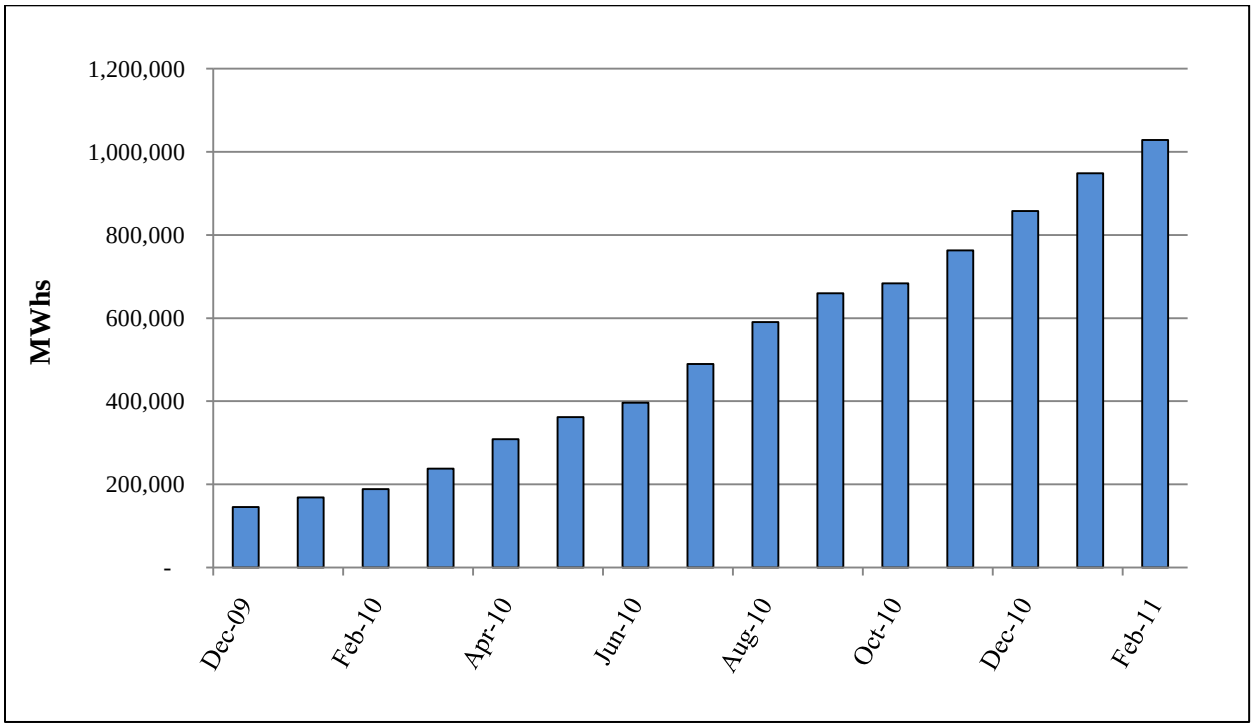
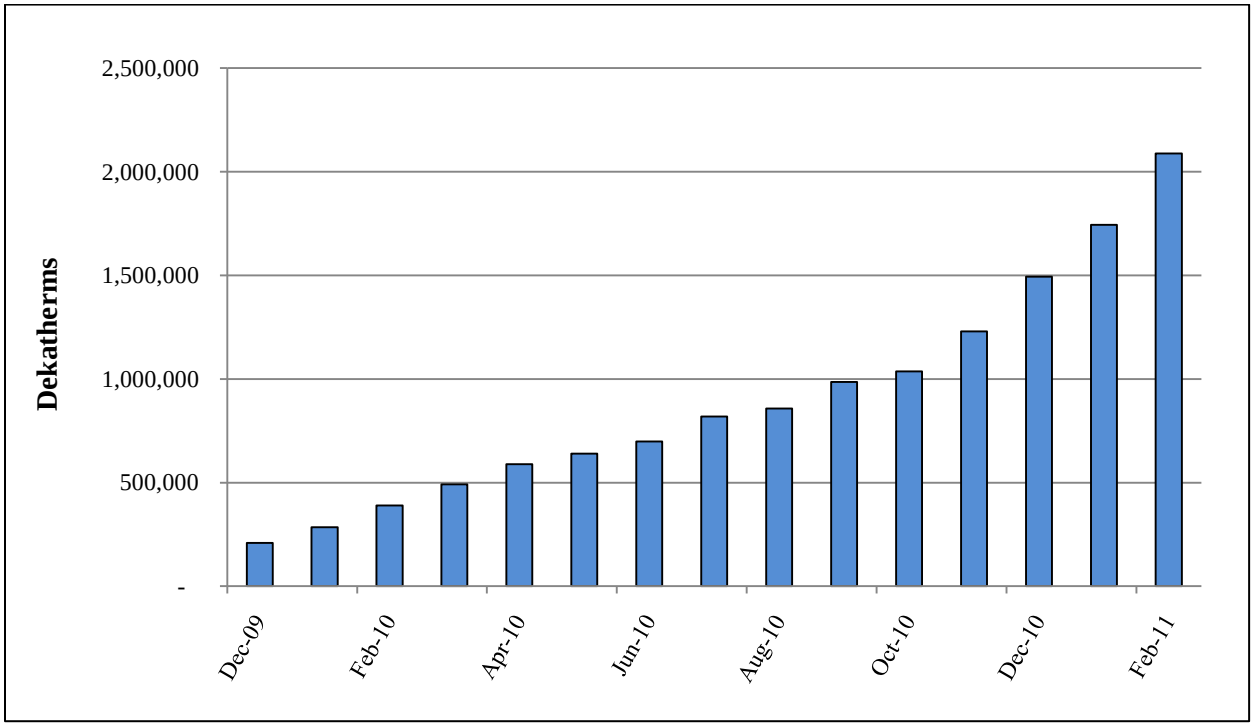


Figure 2: Dekatherm Achievements through February 28, 2011



Most of the shortfall in reaching targets can be attributed to timing issues surrounding the start-up of the programs. When forecasts for 2011 are viewed in isolation from the previous two years, total annual electric savings equate to 96% of the targets for 2011. The forecasts are provided by program administrators.

Table 1a Electric Program Forecasts for 2011 Calendar Year

Program Administrator	2011 Calendar Year MWh Target	2011 MWh Forecasted to be Achieved	**Forecast of Percent Achieved**
Central Hudson	29,248	47,678	163%
Con Edison	218,294	66,552	30%
Niagara Mohawk	244,694	310,532	127%
NYSERDA	876,855	903,384	103%
NYSEG	64,829	58,207	90%
Orange & Rockland	21,345	9,720	46%
Rochester Gas & Electric	42,871	44,126	103%
Statewide Total	**1,498,136**	**1,440,198**	**96%**

Note: Please see updated version of this table at end of document.

The current projections for gas performance in 2011 equate to 66% of targets.[56] This forecast does not, however, include ancillary savings.[57] Ancillary savings have made up nearly 25% of gas savings to date. If the historical percentage of ancillary gas savings were applied, the forecast of actual gas savings would increase to 88% of targets.

Also, the gas savings forecast is heavily influenced by the timing of NYSERDA's Industrial Process and Efficiency Program (IPE), which represents 48% of NYSERDA's dekatherm target. NYSERDA reports that IPE projects can take up to two years to achieve installation of measures. Because of the very long project completion times, NYSERDA

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56 The gas forecasts are also provided by program administrators, based on actual experience combined with projections.

57 Ancillary gas savings are gas savings that result from electric efficiency programs. Although they are not included in program targets, they nevertheless constitute a large percentage of achieved gas savings. For example, NYSERDA's Flex Tech program and its New Commercial Buildings program produce more than half of the total gas savings reported by NYSERDA.

projects the bulk of IPE savings will accrue in 2012 and 2013. This has a large impact on the 2011 projection for NYSERDA's portfolio as a whole.[58]

Table 1b: Gas Program Forecasts for 2011 Calendar Year

Program Administrator	2011 Calendar Year Dth Target	2011 Dth Forecasted to be Achieved	**Forecast of Percent Achieved**
Central Hudson	27,296	24,067	**88%**
Corning	16,073	6,576	**41%**
Con Edison	286,899	260,011	**91%**
KEDLI	150,139	161,875	**108%**
KEDNY	254,466	294,308	**116%**
Niagara Mohawk	411,576	429,777	**104%**
NYSEG	188,395	87,202	**46%**
NYSERDA	1,936,875	911,289	**47%**
Orange & Rockland	14,691	7,673	**52%**
RGE	332,897	190,627	**57%**
St. Lawrence	13,365	6,197	**46%**
Statewide Total	**3,632,673**	**2,379,602**	**66%**

The projected savings, as a percentage of targets, may increase substantially when targets are updated to reflect Technical Manual revisions. The figures of 96% and 66% are based on savings estimates using the lower Technical Manual assumptions, while the 2011 targets themselves have not yet been revised to reflect the more conservative assumptions. For that reason, if the projected savings are realized, 2011 performance will be higher than 96% (electric) and 66% (gas).

[58] Another factor influencing the relative size of the 2011 gas efficiency forecast is the fact that some successful gas programs have been ahead of pace in achieving their targets, thereby requiring a lower amount of savings to be acquired in 2011. The 2011 forecasts provided by the program administrators do not assume an extension of budgets for these programs.

I. Overall Status by Program Administrator

Tables 2 and 3 provide portfolio level key metrics, by PA, including energy savings targets, savings achieved, total program budgets and expenditures through February 2011. Expenditures include funds spent to date and funds committed for projects underway.

Table 2: EEPS Electric Program Budgets, Targets and Achievements through February 28, 2011, by Program Administrator

Note: Please see updated version of this table at end of document.

PA	Net Annual* MWh Acquired	Net MWh Target	Percent of Net MWh Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Central Hudson^	16,506	39,955	41.3%	$ 6,274,706	$ 12,941,277	48.5%
Con Edison	74,458	314,483	23.7%	$ 34,593,180	$ 126,027,561	27.4%
Niagara Mohawk	169,210	339,857	49.8%	$ 61,488,483	$ 83,699,902	73.5%
NYSEG	6,522	46,893	13.9%	$ 3,229,397	$ 14,653,337	22.0%
O&R	8,408	32,872	25.6%	$ 2,325,244	$ 9,352,738	24.9%
RG&E	9,640	26,559	36.3%	$ 3,048,348	$ 8,711,145	35.0%
NYSERDA^	744,135	1,295,984	57.4%	$ 63,545,097	$ 200,722,414	31.7%
TOTAL	**1,028,879**	**2,096,602**	**49.1%**	**$ 174,504,455**	**$ 456,108,373**	**38.3%**

* Net Annual MWh acquired in the first year after measure/project installation
^ Net First-year annual MWh acquired include ancillary electric impacts reported for gas programs

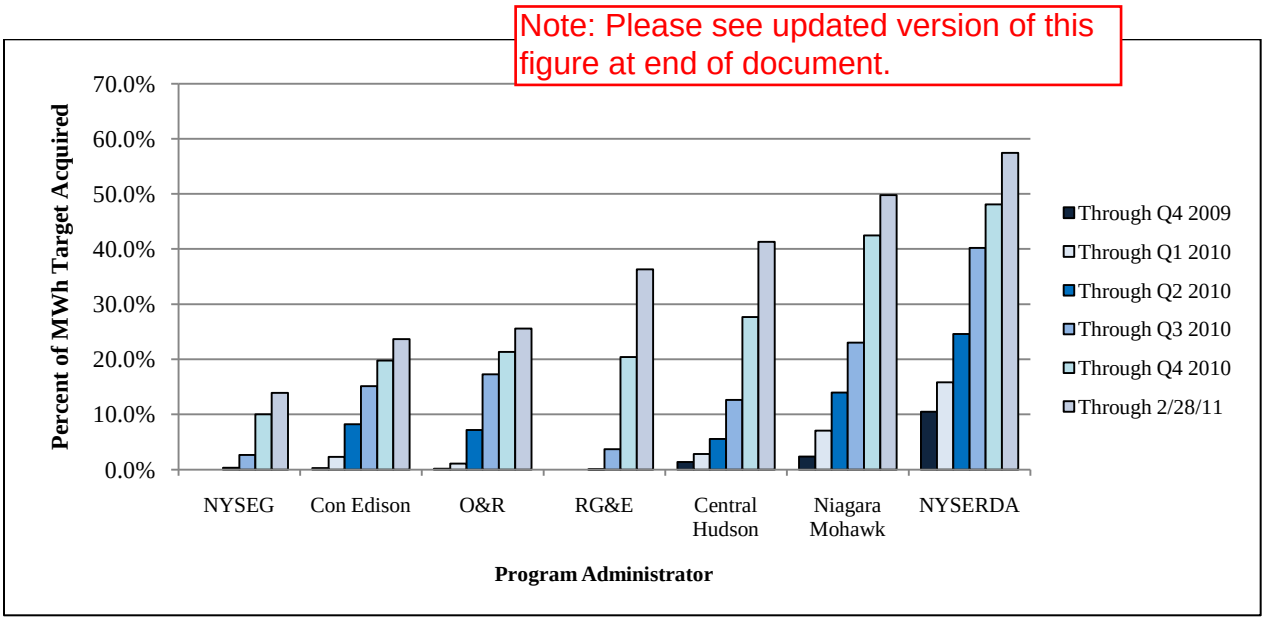
Table 3: EEPS Gas Program Budgets, Targets and Achievements through February 28, 2011, by Program Administrator

PA	Net Annual* Dth Acquired	Net Dth Target	Percent of Net Dth Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Central Hudson	9,007	15,928	56.5%	$ 300,793	$ 484,382	62.1%
Con Edison	35,956	334,836	10.7%	$ 4,022,483	$ 20,159,468	20.0%
Corning ^	9,209	13,139	70.1%	$ 236,151	$ 237,282	99.5%
KED-LI	148,813	174,600	85.2%	$ 6,604,905	$ 9,447,527	69.9%
KED-NY	119,955	302,790	39.6%	$ 5,204,404	$ 15,960,114	32.6%
Niagara Mohawk	364,186	321,287	113.4%	$ 8,959,394	$ 9,825,376	91.2%
NYSEG	135,245	127,901	105.7%	$ 3,262,600	$ 2,912,912	112.0%
O&R	21,573	14,586	147.9%	$ 632,121	$ 577,487	109.5%
RG&E	319,932	224,133	142.7%	$ 5,826,561	$ 4,602,469	126.6%
St. Lawrence Gas	5,545	10,820	51.3%	$ 107,276	$ 223,951	47.9%
NYSERDA†	918,766	1,921,238	47.8%	$ 16,221,423	$ 60,466,303	26.8%
TOTAL	**2,088,187**	**3,461,256**	**60.3%**	**$ 51,378,110**	**$ 124,897,270**	**41.1%**

* Net Annual Dth acquired in the first year after measure/project installation
^ Staff is reviewing Corning's reported savings and expenditures
† Net First-year annual Dekatherms acquired include ancillary gas impacts reported for electric programs

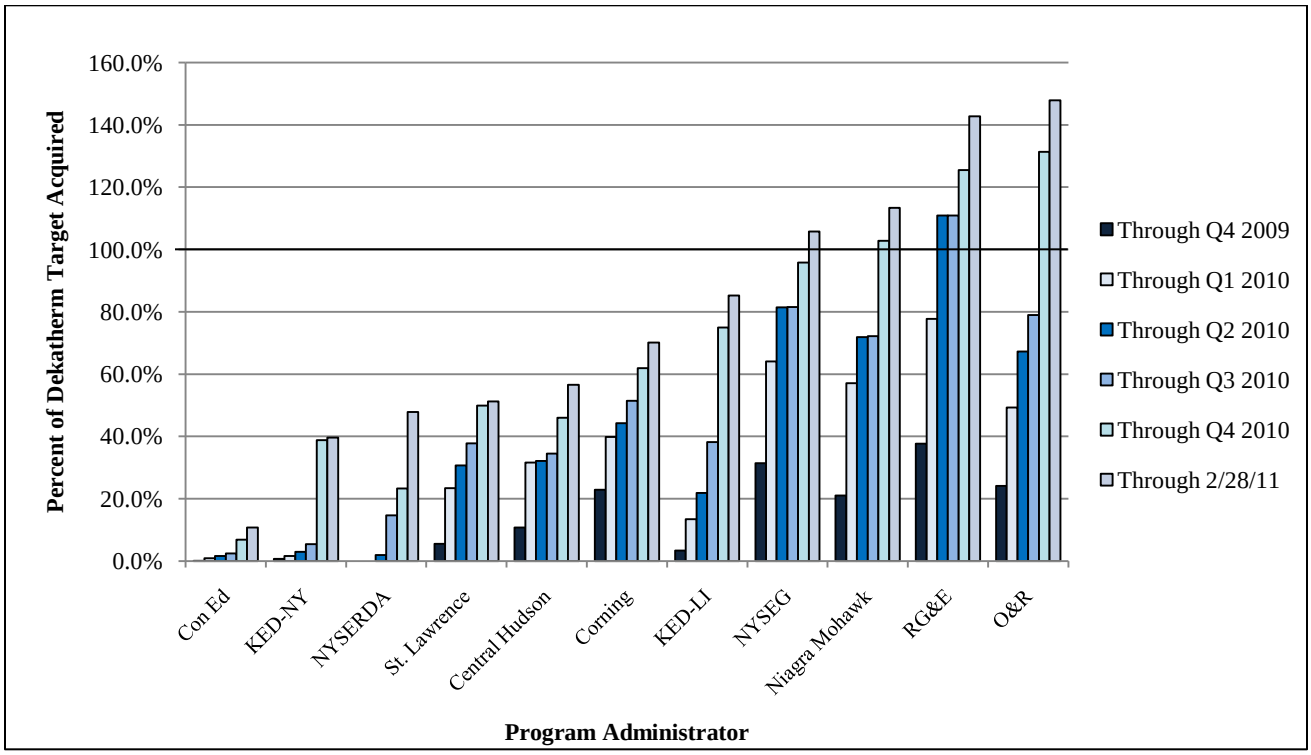
Figures 3 and 4 illustrate, for electric and gas programs, respectively, the percent of energy savings goals achieved by each PA, by quarter and through February 2011. We discuss the factors influencing various programs and sectors later in this report.

Figure 3: Percent of MWh Targets through 2/28/11 Acquired by 2/28/11



To date, NYSERDA has achieved a larger share of its electric savings target than the utility PAs. Many of NYSERDA's EEPS electric programs are expansions of pre-existing SBC efficiency programs. NYSERDA has therefore been able to avoid some of the startup issues that have affected the utility PAs. Niagara Mohawk's affiliates in New England had experience with delivery of energy efficiency programs, which may have contributed to its readiness to achieve energy savings compared to other New York utilities. Central Hudson and Rochester Gas and Electric have shown significant improvement by achieving substantial increases in overall MWh savings during late 2010 and early 2011.

Figure 4: Percent of Dekatherm Target through 2/28/11 Acquired by 2/28/11



Results by Sector

Residential and Residential Low-Income Programs

Electric Programs

The utility- administered electric programs for residential customers consist of appliance recycling programs (Con Edison, Central Hudson, Niagara Mohawk, NYSEG and RG&E); behavioral modification home energy reporting (Niagara Mohawk, Central Hudson, NYSEG and RG&E); central air conditioning (Con Edison and Central Hudson); room air conditioning (Con Edison); and air sealing and insulation (Niagara Mohawk). Orange and Rockland offers a program providing rebates for both efficient appliances and appliance recycling, and provides CFL bulbs with the rebates.

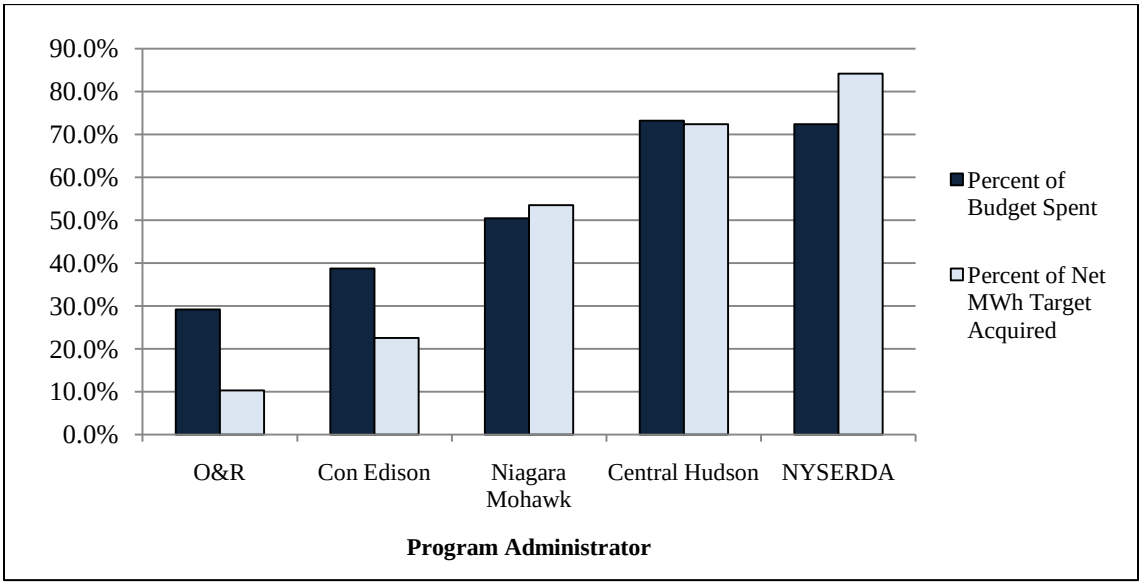
NYSERDA administers a CFL market transformation program and a low-income program, EmPower NY. The following table and chart reflect the approved program budgets and energy savings targets and the energy savings achieved and budget expenditures through February 2011.

Table 4: Key Performance Metrics through 2/28/11 for Electric Residential Programs, by PA
Note: Please see updated version of this table at end of document.

PA	Net Annual* MWh Acquired	Net MWh Target	Net MWh Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Central Hudson	3,678	5,084	72.3%	$ 2,121,222	$ 2,898,821	73.2%
Con Edison	3,168	14,058	22.5%	$ 4,960,712	$ 12,812,128	38.7%
Niagara Mohawk	9,233	17,255	53.5%	$ 4,019,220	$ 7,974,180	50.4%
NYSEG	-	2,581	0.0%	$ -	$ 319,202	0.0%
O&R	51	500	10.2%	$ 138,923	$ 476,271	29.2%
RG&E	-	2,581	0.0%	$ -	$ 319,202	0.0%
NYSERDA	580,448	689,765	84.2%	$ 25,233,383	$ 34,874,058	72.4%
TOTAL	**596,578**	**731,824**	**81.5%**	**$ 36,473,460**	**$ 59,673,860**	**61.1%**

* Net Annual MWh acquired in the first year after measure/project installation

Figure 5: Electric Residential Sector: Percent of Budget Spent and Percent of MWh Target Acquired through 2/28/11
Note: Please see updated version of this figure at end of document.



As the graph above indicates, electric residential programs overall are performing under expectations. Only NYSERDA and Central Hudson report reaching well above 50% of their prorated residential sector energy savings target through February 2011. Many programs have faced challenges in gaining customer interest. There are a few programs which have generated significant savings, such as Niagara Mohawk's electric HVAC program for central air conditioning, which achieved over 200% of its approved energy savings target through 2011 but was ultimately terminated for not being cost-effective in the upstate area. Niagara Mohawk

spent more than its approved program budget in order to achieve the electricity savings. Central Hudson's Appliance Recycling program has been successful, reporting an achievement of 76% of its cumulative target to date. It expects to reach 171% of its 2009-2011 energy savings targets.

Many of the residential programs didn't begin implementing their programs until the second half of 2010 or first quarter of 2011, which contributed to low performance against savings targets. Niagara Mohawk and Central Hudson's behavioral modification programs issued the first home energy reports in the second quarter of 2011 and are not yet recording energy savings. NYSEG and RG&E's Appliance Recycling and Home Energy Reporting and Orange and Rockland's Energy Efficient Products were approved in the first quarter of 2011 and also have not acquired energy savings to date.

Con Edison, with the largest utility program budget, has experienced results that are well below expectations. Updated energy savings forecasts for the remainder of 2011 submitted to Staff by the utility are reduced from the previous forecasts submitted last quarter. Only the Room Air Conditioner Program achieved moderate results. In recent meetings, the company claimed that it has been difficult to reach the residential market due to the lack of energy efficiency equipment available in the marketplace and, the limited number of 1-4 family homes with central cooling in its territory. Also, the vast number of media outlets and expensive media market make it difficult to conduct a sufficient awareness campaign. Con Edison acknowledged problems with its marketing program, and its internal staff is now in more control of marketing, outreach and printed program materials. The PA recently launched a revised outreach, education and marketing campaign to bring attention to its programs, focus customers on energy efficiency awareness and drive customers to their programs.

NYSERDA has reported significant success in its CFL Expansion program. However, NYSERDA has recently learned through its evaluation contractor that the achieved savings per bulb are not as great as had been assumed when the program was designed. This may indicate that the market transformation has been achieved and the program is no longer needed. The findings are still under review by Staff and NYSERDA to determine how this new information will affect EEPS acquired savings. NYSERDA's low-income EmPower NY program has experienced fewer saving per dwelling unit than initially projected due to the more stringent measure and evaluation energy efficiency requirements for measures such as

refrigerators. Implementation of the utility customer referral system for the EmPower NY program as ordered by the Commission is still unresolved and is impacting the number of participants in the program in the downstate area.

Central Hudson and NYSEG/RG&E filed petitions to modify their Commission-approved electric programs. Central Hudson received Commission relief from implementing the Expanded HVAC program which provided rebates for geothermal heating and cooling equipment installations. Of all the projects submitted to the utility, none of the projects pass the required TRC of 1.0 or above.

NYSEG/RG&E petitioned the Commission to provide a waiver to implement the Home Energy Reports programs. The companies solicited vendors to implement the programs and have claimed that the bids received do not include any proposal that would be cost-effective for companies to implement.

Gas Programs

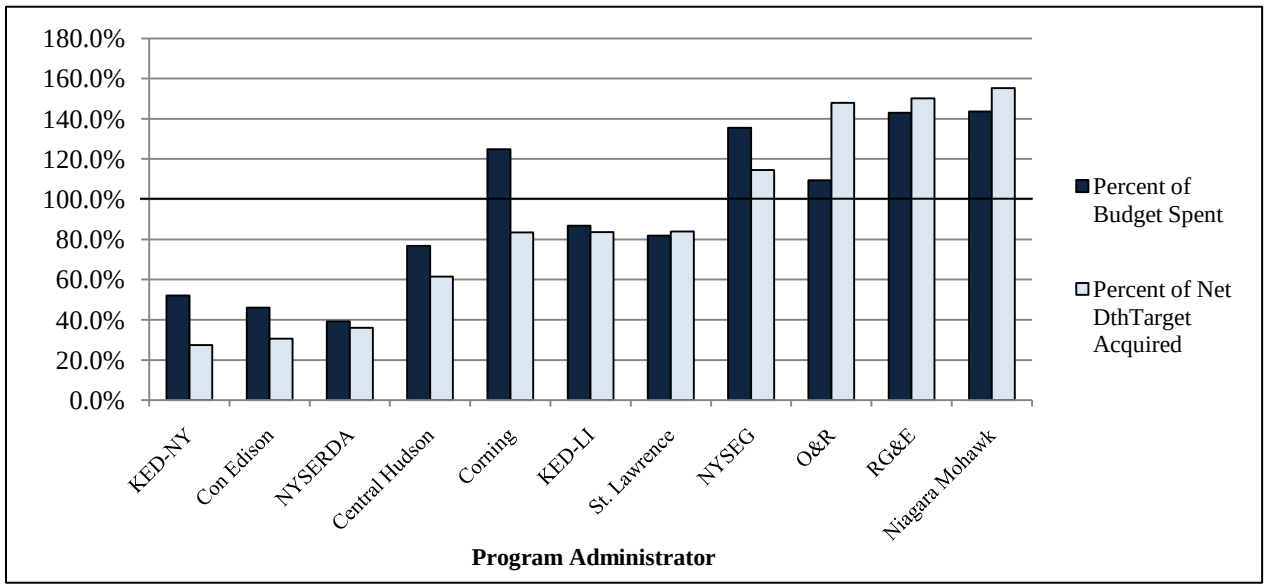
There are twenty-four EEPS residential gas programs, including behavior modification, installation/rebate, and insulation exterior shell programs.

Table 5: Key Performance Metrics through 2/28/11 for Gas Residential Programs by PA

PA	Net Annual* Dth Acquired	Net Dth Target	Percent of Net Dth Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Central Hudson	8,892	14,463	61.5%	$ 291,813	$ 379,782	76.8%
Con Edison	23,814	77,946	30.6%	$ 2,147,399	$ 4,670,677	46.0%
Corning	9,209	11,030	83.5%	$ 236,151	$ 189,026	124.9%
KED-LI	62,375	74,650	83.6%	$ 4,449,587	$ 5,123,855	86.8%
KED-NY	23,839	87,088	27.4%	$ 3,197,531	$ 6,132,381	52.1%
Niagara Mohawk	315,054	202,872	155.3%	$ 6,930,012	$ 4,822,837	143.7%
NYSEG	130,321	113,825	114.5%	$ 3,069,555	$ 2,265,443	135.5%
O&R	21,573	14,586	147.9%	$ 632,121	$ 577,487	109.5%
RG&E	315,353	209,964	150.2%	$ 5,664,278	$ 3,959,242	143.1%
St. Lawrence Gas	5,545	6,602	84.0%	$ 104,336	$ 127,439	81.9%
NYSERDA	180,516	501,920	36.0%	$ 12,209,858	$ 31,155,416	39.2%
TOTAL	**1,096,491**	**1,314,943**	**83.4%**	**$ 38,932,640**	**$ 59,403,583**	**65.5%**

* Net Annual Dth acquired in the first year after measure/project installation

Figure 6: Gas Residential Sector: Percent of Budget Spent and Percent of Dekatherm Target Acquired through 2/28/11



The residential gas portfolio is generally performing well. However, there are several programs where low savings are of particular concern, including the programs administered by NYSERDA, KEDNY, and Con Edison.

Niagara Mohawk and Central Hudson are offering behavior modification programs, which were revised and re-approved this past December with 2011 – 2012 budgets and goals. The companies have recently started implementing the programs. The NYSEG/RG&E Home Energy Reporting Program was approved on Jan 25, 2011 but the Program Administrator has filed a petition requesting delayed implementation.

The "Fast Track" Residential HVAC programs are installation/rebate programs that constitute the majority of residential gas programs, and are offered by all the utilities participating in EEPS. Gas "Fast Track" programs continue to be strong performers upstate. KEDNY and KEDLI after a difficult start are now forecasting meeting program goals. Con-Edison programs continue to be undersubscribed.

KEDNY continues to work with heating contractors, builders, developers, and the plumbers association to increase customer participation. The company projects acquiring 100% of its cumulative 2011 target. Forty percent of the projects are conversions from oil to gas. KEDLI reports that 74% of its residential gas HVAC rebates went to conversion customers. In 2010 KEDLI suspended the program on August 18th, just prior to the heating season, because it

had fully committed the programs cumulative 2009-2010 budgets. The company re-opened the program in January 2011 and by the end of March had committed the 2011 budget. KEDLI intends to suspend the program by the middle of the third quarter of 2011, and projects it will reach 113% of its cumulative goal.

Central Hudson, NYSEG & RG&E expect to meet participation numbers and expend budgets for their Residential Gas HVAC programs, but savings may be below target due to changes to the Tech Manual and the ultimate mix of measures the program delivers.

O&R forecasts that the program will exceed its savings goal in October and expend its budget in November. Niagara Mohawk has reported increased activity recently and is expecting to achieve its savings goal in 2011. Corning and St. Lawrence residential gas HVAC programs report performing well. They expect to expend their budgets, but may not achieve their savings goals due to the average amount of therms saved per job.

Con Edison's Residential HVAC program reports accrued energy savings of 20% of the program target, and has identified that a quarter of the projects are oil to gas conversions. The company has recently increased this program's forecast from 20% to 35% of cumulative through 2011 savings goals, attributed to recent increased activity. Con Edison is working with its vendor to improve the program.

The three National Grid companies' Energy Star programs currently offer rebates for only one measure, thermostats. National Grid has indicated that they would like to terminate the program and have its budget and savings goals rolled into another program.
National Grid's Enhanced Home Sealing programs have not posted savings for these programs to date due to invoicing issues with its vendor. Approximately 50% of projects terminate with incomplete audits (as depicted in the table below) because of health and safety issues such as mold, asbestos and fans not properly vented. Under the BPI standards, any violation of health and safety regulations, require that a BPI contractor cannot complete the project until it is rectified. In the event that an audit is deferred for health and safety, the contractor receives $200 for their time, but does not receive the additional $400 for two hours of air sealing work that accompanies a successful audit. Participation by customers for follow on projects recommended by the audit has been low. Completed follow on projects have been about eight percent for Niagara Mohawk, two percent for KEDNY and ten percent for KEDLI.

Niagara Mohawk stated that energy savings are expected to be reported in April. They expect to achieve 85% of the cumulative 2011 gas target. KEDNY anticipates meeting 56% of the program target and KEDLI also expects to meet 80% of the cumulative 2011 gas target. National grid has recently coordinated with contractors to try to address the problem of deferred audits. Contractors bring supplies to audits that at the expense of customers may be used to immediately address a health or safety concern enabling an audit to continue. The effectiveness of this strategy is not yet clear.

	Complete Audits	Health & Safety Deferrals	% of Audits Deferred
NiMo	275	355	56%
KEDLI	267	176	40%
KEDNY	207	113	35%
Total	749	644	46%

NYSERDA's programs contain gas heating and hot water equipment as well as insulation and exterior shell measures. NYSERDA EmPower Gas anticipates meeting 80% of the cumulative goal through 2011. NYSERDA Home Performance with Energy STAR is forecasted to meet about half of the program's savings goals. NYSERDA attributes roughly twenty percent of the reduced savings to Technical Manual changes and dropping measures previously offered in its SBC program, but which do not pass the EEPS cost effectiveness standard. NYSERDA indicates that the program is progressing slower than planned due to the economy. NYSERDA also asserts that the program is not doing as well as expected because it has to compete with utility administered Fast Track Residential HVAC programs. Regarding Assisted Home Performance with Energy Star, NYSERDA also asserts impacts by Technical Manual changes and the loss of former SBC measures. NYSERDA projects for New York Energy Star Homes achieving 40% of the program's savings goals through 2011. Adoption by the State of more efficient building codes on December 28, 2010 has reduced the amount of above code savings that projects provide.

NFG's Residential Appliance Rebate program is performing similarly to other gas HVAC programs in the up-state market. NFG programs do not have savings goals; however the program is anticipated to fully expend its budget. NFG's Low Income Usage Reduction

Program (LIURP) is administered by NYSRDA as part of the EmPower New York program and NFG anticipates the program will expend 80% of its budget.

Multifamily Programs

Electric Multifamily

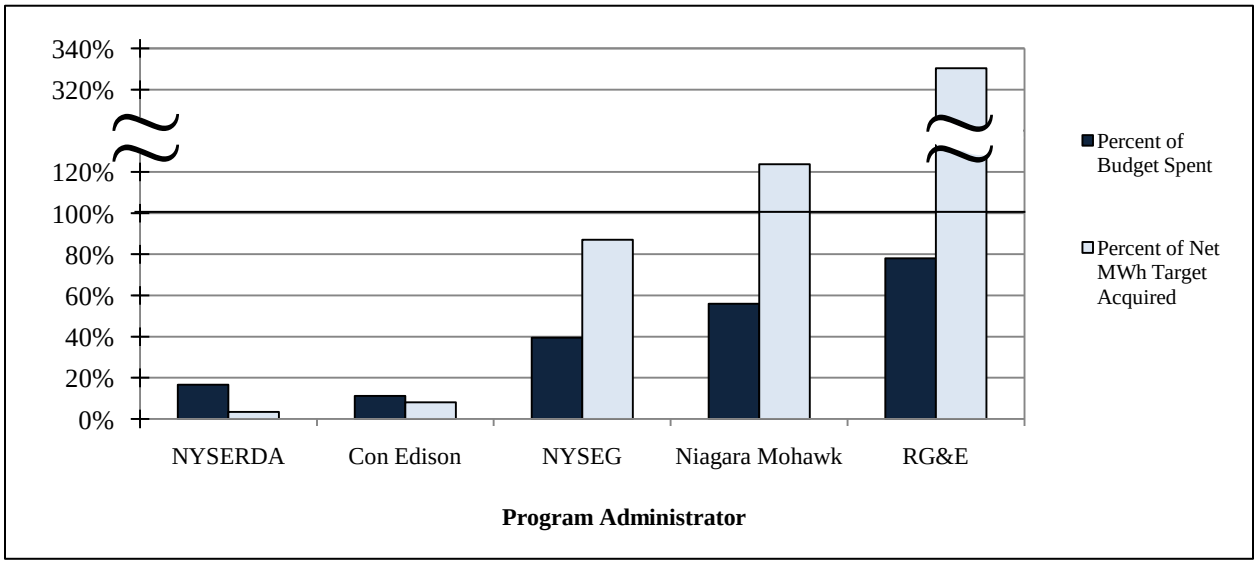
The EEPS multi-family electric programs are designed to serve apartment buildings of 5 units or greater. There are also utility programs (offered by Niagara Mohawk, Con Edison, NYSEG and RG&E) designed to provide energy efficiency services to smaller apartment buildings, in each of their respective service territories. The utility programs target buildings with 5-50 dwelling units, except Con Edison's program that serves buildings with 5-75 units. The NYSERDA programs may serve any multifamily building with 5 or more dwelling units.

Table 6: Key Performance Metrics through 2/28/11 for Electric Multifamily Programs, by PA

PA	Net Annual* MWh Acquired	Net MWh Target	Net MWh Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Con Edison	1,001	12,351	8.1%	$ 1,164,132	$ 10,445,514	11.1%
Niagara Mohawk	2,274	1,837	123.8%	$ 804,641	$ 1,438,407	55.9%
NYSEG	886	1,017	87.1%	$ 337,001	$ 854,495	39.4%
RG&E	3,103	939	330.4%	$ 589,903	$ 756,432	78.0%
NYSERDA	1,212	35,666	3.4%	$ 2,214,143	$ 13,331,215	16.6%
TOTAL	**8,476**	**51,810**	**16.4%**	**$ 5,109,820**	**$ 26,826,063**	**19.0%**

* Net Annual MWh acquired in the first year after measure/project installation

Figure 7: Electric Multifamily Sector: Percent of Budget Spent and Percent of MWh Target Acquired through 2/28/11



As shown in Table 6, the multifamily programs in aggregate have performed well below expectations, although two utility programs – administered by Niagara Mohawk and RG&E – have performed well, with the RG&E multifamily program in particular achieving more than three times its MWh goal prorated through February 2011. Niagara Mohawk and RG&E attribute the majority of the savings in these programs to efficient lighting and lighting fixture measures. Lighting measures have also provided the bulk of the NYSEG program savings. Con Edison's multifamily program - Refrigerator Replacement Plus - has performed well below projections, according to Con Edison, because refrigerators, which were expected to provide substantial program savings, have been deemed not cost-effective after the program was approved. Staff notes that refrigerators have not been found to fail a benefit cost test, but the rebate incentive levels supported by savings levels may be insufficient to induce landlords in multi-family buildings to replace their equipment. Con Edison is continuing the program, however, and expects to achieve some savings through lighting, air conditioning, water heating and weatherization measures.

NYSERDA's MPP and low income MPP programs were relaunched in September 2010, after NYSERDA modified the programs in accordance with Commission orders. Program performance has been well below expectations, although NYSERDA has reported a number of program applications since the program resumed, and through March 2011 had reported

receiving and approving 27 existing and 21 new construction multifamily projects. NYSERDA has stated that changes in program rules have made it difficult for program partners to transition to the new program and attract participation.

NYSERDA's Electric Reduction in Master-Metered Multifamily Buildings (ERMM) Program has been unable to achieve savings because the start of this program has been dependent on the availability of suitable submeters. In March 2011 the first submeters (manufactured by InTech) were approved for use in this program.

NYSERDA's Geothermal Heat Pump Systems program has achieved no savings. A solicitation released in January 2011 drew no proposals. NYSERDA is now planning to re-release the program as an open solicitation and to review proposals on a first come first served basis. However, NYSERDA asserts that the current limitation of seeking electric only savings due to electric only funding is a significant obstacle to receiving viable, cost-effective applications for buildings currently heated with other fuels, and it does not expect to find any viable projects with the program as presently structured.

Gas Multifamily

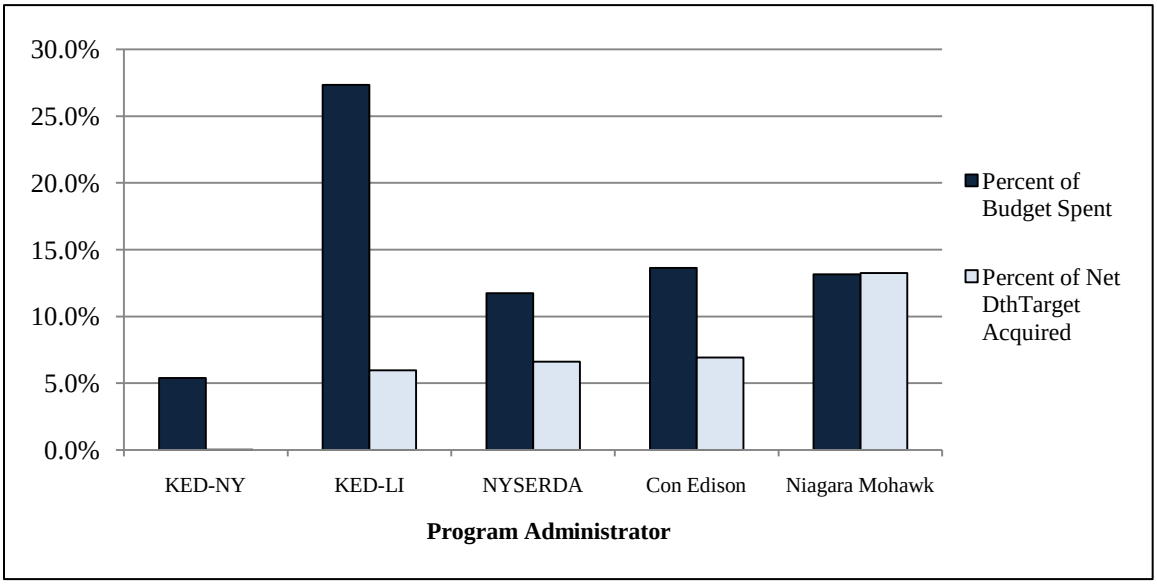
There are six EEPS multi-family gas programs: the four utility programs are administered by Con Edison, Niagara Mohawk, KEDNY, and KEDLI; and the two state-wide programs are administered by NYSERDA (Multifamily Performance and Low-Income Multifamily Performance). The Niagara Mohawk and KEDLI programs serve buildings with 5 – 50 dwelling units, and the utility programs in the NYC area serve buildings with 5 - 75 dwelling units (Con Edison, and KEDNY). NYSERDA's statewide programs can serve any multi-family building with 5 or more dwelling units.

Table 7: Key Performance Metrics through 2/28/11 for Gas Multifamily Programs, by PA

PA	Net Annual* Dth Acquired	Net Dth Target	Percent of Net Dth Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Con Edison	10,967	158,510	6.9%	$ 1,386,643	$ 10,162,542	13.6%
KED-LI	867	14,520	6.0%	$ 168,869	$ 617,470	27.3%
KED-NY	11	72,534	0.0%	$ 184,204	$ 3,418,702	5.4%
Niagara Mohawk	3,474	26,240	13.2%	$ 201,620	$ 1,532,726	13.2%
NYSERDA	22,375	337,944	6.6%	$ 2,094,079	$ 17,836,264	11.7%
TOTAL	**37,694**	**609,747**	**6.2%**	**$ 4,035,417**	**$ 33,567,703**	**12.0%**

* Net Annual Dth acquired in the first year after measure/project installation

Figure 8: Gas Multifamily Sector: Percent of Budget Spent and Percent of Dekatherm Target Acquired through 2/28/11



All of the gas multifamily programs are achieving participation rates that are far below expectations. Through February 2011, KEDNY reports no energy savings acquired and KEDLI has achieved only 6% of its savings target through 2/28/11. The program administrators report that they are working to revise their respective programs to try and improve performance. Con Edison reports that it has not met its projected savings per-project goals due to flaws in the original design of its multifamily program. The company further states that the revised technical manual lowered achievable savings on measures such as boilers, heating controls and pipe insulation, which ultimately would lower Con Edison's projected Multifamily forecast.

Multifamily and Multifamily Low Income forecast approximately 36% of the programs' combined savings goals.

Niagara Mohawk reports that it is having a hard time reaching potential gas customers and is now putting forth an extra effort to increase participation. The company claims that gas master-metered buildings are not eligible for the program and that it is difficult to get landlords of single-metered buildings to commit to projects since the landlord does not pay the utility bill. Niagara Mohawk is interested in increasing the customer's incentives from 25% to 30%. Niagara Mohawk forecasts achieving savings of 40% of its cumulative 2011 gas target.

KEDNY reports that it is exploring the viability of running a joint program with Con Edison in an attempt to better serve the jointly served customers by offering an integrated energy efficiency solution (i.e., a Con Edison electric customer that is also a KEDNY gas customer). Both KEDNY/KEDLI state that the 50 and 75 dwelling unit caps limit eligible participants in NYC and Long Island from participating in the program. KEDNY forecasts achieving 25% of its cumulative 2011 Multifamily program gas target, and KEDLI forecasts achieving 50% of its cumulative 2011 Multifamily program gas target. However, Staff remains concerned regarding the feasibility of either company to attain its forecasted target, considering that KEDNY has achieved less than 1% of its goal to date, and KEDLI has achieved approximately 4% of its goal to date.

As discussed above, NYSERDA's multi-family programs are performing well below expectations, with the gas programs performing similarly to the electric programs. NYSERDA reports that it is likely that they will submit a request to revise its savings targets for this gas program, stating that recent changes to the technical manual impacted its initial analysis.

Commercial and Industrial Programs

Electric Commercial and Industrial

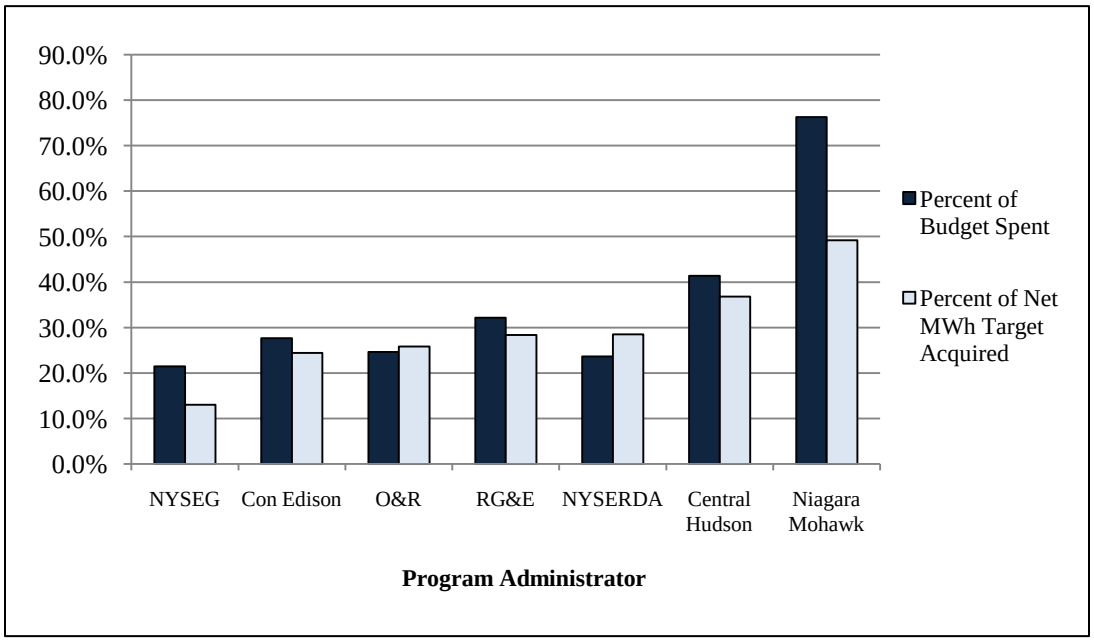
There are 24 approved electric commercial and industrial (C&I) programs offered collectively by the New York program administrators (PAs), and 20 of the programs are currently operational and reporting savings. These C&I electric programs are each designed to provide a variety of technical and financial assistance to C&I customers to encourage them to make cost effective energy efficiency improvements.

Table 8: Key Performance Metrics through 2/28/11 for Electric C&I Programs by PA

PA	Net Annual* MWh Acquired	Net MWh Target	Net MWh Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Central Hudson	12,828	34,870	36.8%	$ 4,153,484	$ 10,042,456	41.4%
Con Edison	70,289	288,075	24.4%	$ 28,468,336	$ 102,769,919	27.7%
Niagara Mohawk	157,703	320,765	49.2%	$ 56,664,623	$ 74,287,314	76.3%
NYSEG	5,636	43,294	13.0%	$ 2,892,396	$ 13,479,640	21.5%
O&R	8,356	32,371	25.8%	$ 2,186,321	$ 8,876,468	24.6%
RG&E	6,537	23,039	28.4%	$ 2,458,445	$ 7,635,512	32.2%
NYSERDA	162,475	570,553	28.5%	$ 36,097,571	$ 152,517,142	23.7%
TOTAL	**423,825**	**1,312,968**	**32.3%**	**$ 132,921,176**	**$ 369,608,451**	**36.0%**

* Net Annual MWh acquired in the first year after measure/project installation

Figure 9: Electric C&I Sector: Percent of Budget Spent and Percent of MWh Target Acquired through 2/28/11



As shown in Table 8, the statewide C&I portfolio as a whole has underperformed to date, with overall acquired savings and expenditures approximately 32% and 36%, respectively, of the prorated totals approved through February 2011. With respect to individual PA performance, all have achieved well less than half of their respective energy savings targets to date. PAs have stated the poor economy has been a major impediment to progress, making it difficult for businesses to pay upfront costs needed to implement an energy efficiency

improvement plan. Other factors mentioned by the PAs include skepticism from the business community as to whether utilities will cover project costs as advertised, and confusion in the market place resulting from NYSERDA and the utilities targeting the same customers with differing incentive offerings for similar services and measures.

As with other customer sectors, much of the realized savings continue to result from the implementation of efficient lighting measures. Lighting measures often have faster paybacks compared to other types of measures and are often less disruptive to business operations. High efficiency electrical motors were once expected to contribute savings to C&I EEPS programs, but have become commonplace and have been discontinued as an eligible measure due to new federal standards now mandating their use. Finally, the lag time between project inception and the implementation of measures is a key factor in the performance perceived for the C&I sector. C&I projects, in particular those at large commercial or industrial facilities, often take many months from when engineering audits and analyses are completed to when actual efficiency measures are implemented and savings begin accruing. The savings from projects that are currently underway will not be reported until the projects are completed.

NYSERDA's programs, geared toward large C&I customers, have reported mixed results. The Agriculture Efficiency program, launched in January 2011, received sufficient applications within the first two months of program operation that NYSERDA believes it will commit all program funding. The Existing Facilities Program, likewise, has been performing well above expectations and has already exceeded its 2011 year-end energy savings target. The remaining NYSERDA programs have performed below expectations, although project applications have increased in recent months in the FlexTech, Industrial Process Efficiency and New Construction programs. NYSERDA has forecast increased savings as a result of the upswing in applications, although still below original targets. Project lag has a large impact on reported savings achieved to date from NYSERDA's large C&I programs, in particular, the FlexTech audit and technical assistance program and the New Construction Program.

The utility C&I programs have also reported much lower than expected savings to date. Con Ed, NYSEG and RG&E's large Commercial and Industrial Equipment Rebate Programs, which offer prescriptive measure rebates, have reported single digit energy savings and expenditure rates, as have those utilities' complementary custom efficiency programs. NYSEG and RG&E are forecasting only very modest increases in savings for these programs

(around 15-27% of the cumulative goal by year end). Con Ed, in contrast, is forecasting an upswing in large C&I activity and expects to meet 70% of its prescriptive program target and 100% of its custom program target by year end.

Niagara Mohawk's Energy Initiative Large Industrial program, designed to provide technical assistance and custom and/or prescriptive rebates for customers with an electric demand of more than 2 MW, is projected to meet about 90% of its cumulative approved energy savings target by year end. Niagara Mohawk's Energy Initiative – Mid-Size C&I program, designed to provide similar assistance to customers with demand from 100KW to 2MW, is projected to meet approximately 60% of its cumulative 2011 year-end target. In an effort to further increase C&I participation levels, Niagara Mohawk launched its Energy Solutions Partner Program during the first quarter of 2011. This program is designed to extend the sales force and expand outreach to facilitate identifying and completing projects. Niagara Mohawk claims that competition to serve large C&I customers exists with NYSERDA, hindering its ability to acquire projects. Central Hudson's Mid-size Commercial Business (electric) Program is doing well and is forecast to meet its cumulative year end MWh target for 2011. Central Hudson's implementation contractor has coupled this program with additional energy efficiency incentives available under the Federal Government's Energy Policy Act of 2005 (EPACT), which has greatly increased the participation of municipalities. This program could potentially run short of funding should participation stay at the current high level.

A unique program administered by NYSEG and RG&E is the Block Bidding program that procures electric energy savings from nonresidential electric customers by allowing interested providers to offer energy efficiency reductions through a request for procurement (RFP) process. This program, as designed, has an inherent long cycle time from the RFP release to when energy savings are achieved, which accounts for low savings achieved to date but expected future savings from contracts in place. RG&E is forecasting that it will exceed its MWh target and NYSEG is forecasting that it will obtain just over half of its MWh target by year end. NYSEG and RG&E are considering expanding the design of the program including the possibilities of adding gas measures and residential aggregation blocks.

O&R's Commercial Existing Buildings Program (for 100KW or larger customers) is not expected to meet its MWh targets. To address this issue O&R plans on implementing a new advertising campaign in order to boost participation.

The utility SBDI programs were approved for Con Edison, O&R, Central Hudson and Niagara Mohawk as Fast Track EEPS programs, and were also later approved for NYSEG and RG&E. They are designed to promote energy efficiency for small C&I customers with average monthly peak demand of less than 100 KW. Through February 2011 the savings rate of these programs, as a percent of their cumulative 2011 energy targets, is relatively consistent across the utilities (averaging approximately 24%). Further, the utilities are forecasting increased savings in 2011, with year-end savings expected to range from 55% (Con Ed) to 101% (Niagara Mohawk) of the cumulative 2011 MWh savings targets. As with the other C&I programs, the majority of SBDI electric savings have been acquired as a result of installation of efficient lighting. Barriers to customer participation mentioned by the PAs include small businesses lacking upfront capital to commit to projects, particularly under current economic conditions. NYSEG and RG&E have stated that while SBDI program contractors have surveyed a large number of small business facilities, many projects fail to come to fruition due to lack of financial commitment by participants, and further, that this increases the cost per MWH achieved of running the programs. Con Ed and O&R's SBDI programs have experienced poor customer participation reported to date, with inadequate marketing being a major factor. Further, Con Edison and O&R have reported a high installation contractor turnover rate due in part to failed or poor installations and lack of participant trust with the implementation. Central Hudson's SBDI program has been moderately successful with the zero percent financing incentive helping to increase customer participation. Central Hudson has also stated, however, that its overall SBDI MWh target is too high for its service territory and disproportionate to its aggregate EEPS portfolio. (Central Hudson's SBDI target is approximately 81% of its total portfolio target.) The utility PAs also assert that the 100KW eligibility cap restricts some otherwise suitable customers from participating in the program. Lastly, Niagara Mohawk has reported that its SBDI program is experiencing steady growth but will still not reach its estimated target, despite a large number of projects in the pipeline. Niagara Mohawk stated that its SBDI budget is being spent at a much faster pace than achieved savings because the expenditures include financing the customer cost of projects for on-bill financing loans.

Gas Commercial and Industrial

The commercial gas portion of the EEPS portfolio currently offers 21 programs with a total budget through 2011 of $58.3 million, and an associated savings target of 2.8 million

dekatherms. The commercial portfolio is allocated between commercial customers using less than 12,000 dekatherms per year, and large industrial customers using 12,000 or more dekatherms per year. The programs include offerings for natural gas space and water heating systems and equipment improvements with efficiency evaluations, technical assistance, and financial incentives to better integrate natural gas usage in heating systems and commercial/industrial processes. The programs are a mix of prescriptive and custom rebate offerings for equipment installed and services.

As of February 2011, seven programs had not reported savings. However, as of March only Corning and St. Lawrence have not received any project applications.[59] The seven programs that are not reporting gas savings are: NYSERDA's new construction program; NYSERDA's agricultural program; Con Edison's custom C&I gas efficiency program; RG&E's custom non-residential program; Niagara Mohawk's large industrial program; and the Corning and St. Lawrence gas small commercial programs.

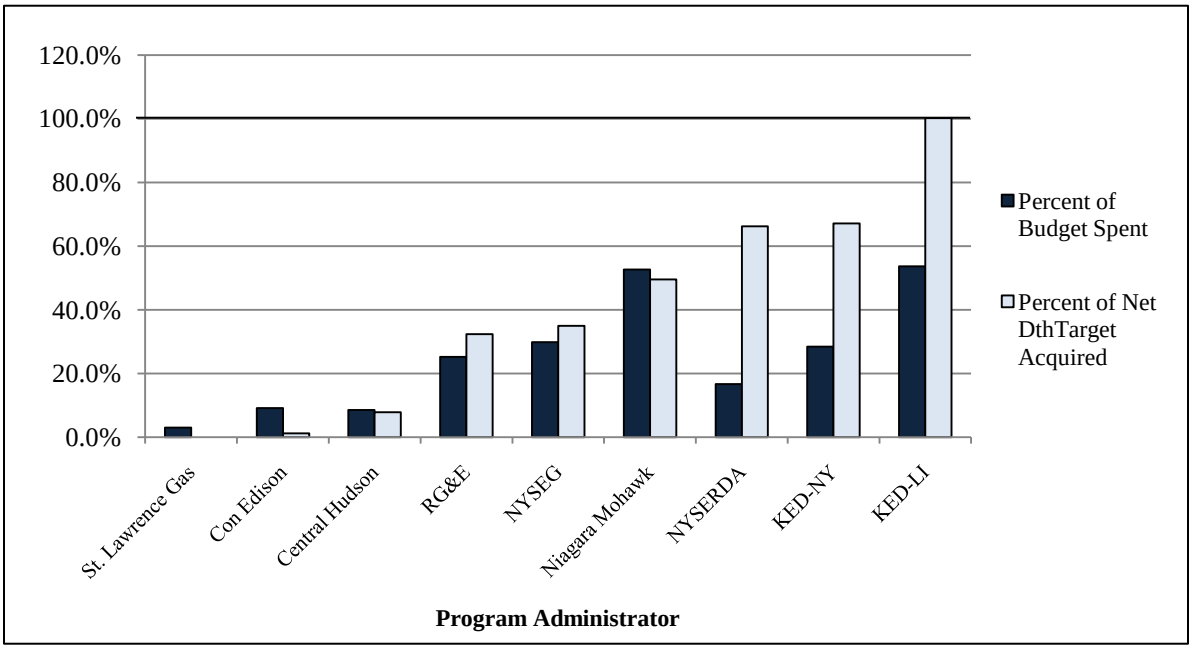
Table 9: Key Performance Metrics through 2/28/11 for Gas C&I Programs by PA

PA	Net Annual* Dth Acquired	Net Dth Target	Percent of Net Dth Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Central Hudson	115	1,466	7.9%	$ 8,980	$ 104,600	8.6%
Con Edison	1,175	98,380	1.2%	$ 488,441	$ 5,326,249	9.2%
Corning	-	2,109	0.0%	$ -	$ 48,257	0.0%
KED-LI	85,571	85,431	100.2%	$ 1,986,448	$ 3,706,202	53.6%
KED-NY	96,105	143,168	67.1%	$ 1,822,668	$ 6,409,031	28.4%
Niagara Mohawk	45,657	92,176	49.5%	$ 1,827,762	$ 3,469,814	52.7%
NYSEG	4,925	14,077	35.0%	$ 193,045	$ 647,469	29.8%
RG&E	4,579	14,169	32.3%	$ 162,283	$ 643,227	25.2%
St. Lawrence Gas	-	4,218	0.0%	$ 2,940	$ 96,512	3.0%
NYSERDA	715,875	1,081,374	66.2%	$ 1,917,486	$ 11,474,624	16.7%
TOTAL	**954,002**	**1,536,566**	**62.1%**	**$ 8,410,053**	**$ 31,925,984**	**26.3%**

* Net Annual Dth acquired in the first year after measure/project installation

[59] Corning and St. Lawrence Gas have small commercial programs that were started up in the fourth quarter of 2010.

Figure 10: Gas C&I Sector: Percent of Budget Spent and Percent of Dekatherm Target Acquired through 2/28/11



As shown in the tables above, the statewide gas C&I portfolio as a whole has underperformed to date, but it is performing slightly better than what is occurring statewide for the electric C&I programs.

Generally, the utility C&I gas programs have experienced steady growth in savings. Con Edison is having a harder time acquiring commercial customer participation in its service territory. According to the utility, and echoed by PAs, the weak economy makes it difficult for its C&I customers to invest in efficiency projects at this time even with the financial incentives. In addition, the utility states that many of the larger customers are interruptible customers, and not eligible for the EEPS program. According to all PAs, the C&I customers are generally choosing more prescriptive rebates than custom rebates.

Niagara Mohawk claims that the competition with NYSERDA hinders their ability to acquire projects for its mid-sized commercial program (Energy Initiative Electric and Gas Mid-Sized Program). Niagara Mohawk also states that cost-effectiveness and minimum payback requirements restrict their ability to successfully develop additional prescriptive measures. The company reports that it had planned to offer an agricultural pilot program, but NYSERDA's agricultural program has acquired many of the potential customers before Grid

could get it started. However, Niagara Mohawk states that NYSERDA reportedly will refer customers to Grid programs. The company also notes that lower gas commodity costs remain which lengthens the payback period on projects. Despite these challenges Niagara Mohawk projects meeting 100% of the 2011 cumulative goal for this program.

Niagara Mohawk reports that it continues to see interest and momentum in the large industrial gas program, centered around large custom projects. The company states that it is continuing an aggressive marketing campaign. Niagara Mohawk is forecasting savings at 100% of the cumulative 2011 gas target. In addition, Niagara Mohawk reports that it launched an aggressive broad based marketing campaign for 2011, and forecasts gas savings at 77% of the cumulative 2011 target for its Commercial High Efficiency Heating and Water Heating Program.

Niagara Mohawk reports that it continues to reach out to other PAs to work on joint projects, and the NYSERDA/National Grid Hospital Initiative is still in the pipeline. To break through the low rate of participation, the company established the Energy Solutions Partner Program for all electric and gas programs. The program is designed to extend the sales force, outreach, project identification and project completion. Any trade ally can apply and meet the application requirements can participate. The program launched in April.

KEDNY/KEDLI report that they are pursuing other solutions to break through market barriers for their commercial programs, such as requesting approval of additional measures, and working with Con Edison's vendor to provide a direct install program. The companies report that they are leveraging an account manger – based mechanism to better serve customers with an integrated energy solution. KEDNY/KEDLI state that they are continuing same approach with their other energy partners (i.e., NYPA and LIPA). KEDNY and KEDLI both project achieving 100% of their cumulative 2011 targets.

KEDLI has suspended all marketing efforts for the prescriptive program, but it is still marketing the custom program. The program gained large energy savings in the fourth quarter of 2010, and the company is considering shifting funds from other programs.

KEDNY/KEDLI reports that it continues to conduct outreach meetings to gain interest in the program, especially with regard to its KEDNY program. The companies state that the limited number of large industrial accounts inhibits their pursuit of customer projects. They also claim that competition from multiple program administrators remains a barrier to meet

targets, and that there are not many eligible projects in the territory. KEDNY projects achieving 100% of its cumulative large industrial 2011 target, and KEDLI projects achieving 85%.

NYSERDA launched the Agricultural Energy Efficiency Program on January 6, 2011, and receiving so much participation that the program stopped taking applications on March 25. Applications are working towards implementation, but have not achieved savings yet. NYSERDA is forecasting meeting 100% of program goals.

NYSERDA has indicated that the ability of the Industrial & Process Efficiency Program, the FlexTech Program the Existing Facilities Program and the New Construction Program to meet cumulative 2011 savings goals and budget expenditures have been compromised by long project development times from technical studies to contract to installation. NYSERDA have recently submitted updated operating plans that reflect the longer lead times.

Joint Program Administrator Initiatives

Two notable joint efforts between NYSERDA and utility PAs have been underway to reach specific C&I market segments. Con Edison and NYSERDA developed a joint data center initiative that targets all types of data centers in the Con Edison service territory. The program offers technical assistance and financial incentives through Con Edison's Commercial and Industrial Energy Efficiency Program and NYSERDA's Industrial and Process Efficiency Program. In the seven months since the initiative began, 36 applications have been received representing an estimated 16,000 MWh of energy savings, and Con Edison and NYSERDA expect up to 77 projects and approximately 36,000 MWh achieved savings by year-end 2011. NYSERDA describes the process as having increased the access to, and the adoption of, data center energy efficiency measures and demonstrated the success of a utility/NYSERDA partnership by reducing customer confusion, avoiding program delivery competition, and thereby increasing program participation and customer satisfaction.

NYSERDA and Niagara Mohawk have been working jointly to provide energy efficiency services to hospitals located in Niagara Mohawk's service territory. The program, with a combined funding allocation of $10 million, is designed to provide hospitals with individualized and targeted technical assistance and was expected to generate as much as $5 million in equivalent annual energy savings. While the program has had some success in

reducing customer confusion through using targeted, coordinated outreach, this joint effort has not produced the results expected.

Non-jurisdictional Wedges

The 2008 EEPS Order establishes a "jurisdictional goal" for the activities funded through surcharges on utility rates regulated by the Commission. Remaining portions of the State's "15 by 15" goal were projected to be met by other entities as well as by improvements in building codes and appliance standards.

The anticipated contributions of non-EEPS factors are detailed in Table 5 of Appendix 1 of the 2008 EEPS Order. The largest of the non-jurisdictional contributions are expected from Codes and Standards (cumulative savings through 2015 of 7,947,588 MWh), LIPA (2,167,035 MWh) and NYPA (1,756,426 MWh).

Codes and Standards

In the 2008 EEPS Order the Commission assumed cumulative energy savings from building codes and appliance standards (or "codes and standards") for the period 2009-2015, of nearly 8 million MWhs, a figure comparable to the expected achievement from EEPS programs. The Commission did not specify estimates for demand savings or gas savings from codes and standards. The Commission also noted that the benefit/cost ratio and the potential energy savings associated with enhancing codes and standards exceeds that of most, if not all, efficiency programs. Although the savings from codes and standards are inherently difficult to forecast, the Commission found that the potential savings are so large and cost effective that they must be accounted for.

Staff has reviewed the assumptions in the 2008 EEPS Order, in light of subsequent developments. We conclude that the estimates reflected in the 2008 EEPS Order continue to be reasonable. Our initial review seemed to indicate that the contribution of new standards toward the 15 x 15 goal might be substantially greater than was assumed in the 2008 EEPS Order. This is largely because federal legislation and rulemaking on numerous standards have been more aggressive than assumed in 2008. State standards have also been changed. Detailed analysis of the largest of these items, however, provides reason to doubt that the full benefit of the standards will be enjoyed within the 2012-2015 timeframe.

Measures Required By Federal Laws

In 2007, the Energy Information and Security Act identified nine measures which could be expected to yield energy savings during the 2008 to 2015 time frame. Implementation of Federal legislation was to include the following measures: (with expected New York annual energy savings in parenthesis): general service incandescent lamps (2,784 GWh); reflector lamps (151 GWh); external power supplies (70 GWh); metal halide lamp fixtures (45 GWh); walk-in refrigerators and freezers (24 GWh); dishwashers (1GWh); electric motors (4 GWh); residential dehumidifiers (7 GWh); and boilers (0.07 GWh). The annual energy savings for New York State from all measures except general service incandescent lamps comes to 302 GWh.

In 2008, Staff projected that all Federal measures would produce cumulative energy savings of 4,889 GWh (2008-2015).[60] The annual savings anticipated from the phase-out of incandescent lamps are responsible for nearly 72percent of all Federally legislated savings.

The Energy Independence and Security Act (EISA) of 2007 raised standards for common light bulbs, requiring them to use about 25-30% less energy than today's most common incandescent light bulbs. These new efficiency standards, which will be phased in between 2012 and 2014, set the maximum wattage for light bulbs according to their brightness or lumens (as new term to most of us). In 2012, the traditional 100-watt bulb will not meet the new standard of 72 maximum watts (see chart below).[61] The same will be true for the traditional 75-watt bulb in 2013 and the 60- and 40-watt bulbs in 2014 when the new maximum wattages become effective.

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60 Case 07-M-0548. March 26, 2008. "DPS Staff Report on Recommendations for the EEPS Proceeding." Attachment 5, page 32.

61 The Federal Law chose to eliminate first, the lamp which consumes energy the most so that energy savings will occur progressively.

EISA 2007 Prescribed Standard for General Service Incandescent Lamps

Rated Lumen Ranges	1490-2600	1050-1489	750-1049	310-749
Maximum Rated Wattage	72	53	43	29
Minimum Rate Lifetime (hrs)	1000	1000	1000	1000
Effective Date	1/2012	1/2013	1/2014	1/2014

With the "planned" phase-in period beginning in 2012 and ending in 2014, the opportunity for new lighting measures to make a significant contribution toward the 15X15 goal is limited.[1]

In addition, the Amended General Service Fluorescent Lamp Standards will affect certain models of commonly used GSFLs (such as some T12s and 700 series T8s) likely to become unavailable because they are too inefficient to meet the prescribed efficacy levels[62].

Consumer behavior during the 2012 to 2014 phase-in period could delay anticipated energy savings from lighting improvements. NYSERDA has observed that market adaptation to new requirements includes the time needed to exhaust the stock of existing supplies. With a typical T12 lamp life of 3-8 years, and considering the extent of consumer stockpiling, near term energy savings (i.e., within 1 to 3 years of the 2012 to 2014 time period) may be relatively small.[63]

Federal Regulations

On February 5, 2009, a Presidential Memorandum ordered the US Department of Energy to complete five new standards subject to legal deadlines by August 8, 2009. The Memorandum further ordered expedited work toward completing standards that were due after

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62 GSFLs that will likely be available on the market include high-efficacy T8 lamps and T5 lamps. Lamps with a CRI of 87 or greater and all 4ft. lamps less than 25W are exempt from these standards.

63 According to market data from the National Electrical Manufacturer's Association, 30% of all lamps sold in the US today are T12 and a majority of those lamps are affected by the new regulations.[63] Absent early replacement, a typical lamp life of 3-8 years, together with questions about the extent of stockpiling, suggests that near term changes (1-3 years) to the volume of T-12 sales may be relatively small. Over time, as stockpiles dwindle and existing installed T-12 lamps fail, the fraction of linear fluorescent sales consistent with the new standard will grow. Time constraints and data limitations prevent closer estimation at this point.

August 8, 2010, especially those with the largest potential savings. US DOE took further steps on its own initiative to implement standards ahead of schedule for additional products. In all, as required by a combination of court orders, Congressional deadlines, agreements between appliance manufacturers and efficiency advocates[64], and the President's memorandum, over the next four to five years DOE is scheduled to complete new standards for twenty-six products. This pace of work far exceeds what DOE has done at any other time in its history.

State Regulations

States may set appliance energy efficiency standards for appliances which do not already have Federal standards in place. Usually, these standards set minimum efficiency requirements for appliances sold for retail in the state. In 2008, Staff estimated the 2015 cumulative energy savings in New York State from State rulemakings to be 1,705 GWh.[65] Achieving these savings requires the State to remain on schedule to develop appliance standards in time for them to be allowed to accumulate energy savings prior to December 31, 2015.

The measures assumed in the 2007 forecast have not been adopted, although five other measures (totaling 65 GWh in annual savings) were adopted.[66] This development, combined with an apparent error in developing the 2007 forecast, indicates a shortfall of approximately 1,160 GWh in the cumulative 2015 savings attributable to State standards.

The California Energy Commission, however, has adopted efficiency standards for new televisions sold after January 1, 2011 (Tier One) and January 1, 2013 (Tier Two.) Due to the dominant market share represented by California, manufacturers frequently comply with California standards in products sold in all fifty states. The extent to which this will occur with

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64 http://www.aham.org/ht/a/GetDocumentAction/i/49954

65 Case 07-M-0548, Staff Report on Recommendations for the EEPS Proceeding, March 25, 2008, Attachment 5, page 32.

66 On July 15, 2010, New York State approved energy efficiency standards for five measures, which did not include any of the six measures originally considered in the 2007 estimate. The five measures (with annual savings and implementation date in parenthesis) enacted on July 15, 2010 are: (1) portable lighting (28 GWh, 2013) , bottle-type water dispensers (4 GWh, 2013), commercial hot food holding cabinets (2 GWh, 2013) , portable electric spas (6 GWh, 2013, and residential pool pumps (25 GWh, 2013). The six standards expected in 2007 were: (1) furnace fans, (2) fluorescent fixtures, (3) HID ballasts, (4) night-lights, (5) neon sign power supplies and (6) microwave ovens.

respect to the television standards is not known at this time. If the California standards were in effect in New York, estimated cumulative savings through 2015 are nearly 1000 GWh.

The Energy Conservation Construction Code of New York State (the "Energy Code")

In 2007, the Commission estimated total savings from codes and standards but did not publish numbers showing expected savings from building codes separately from appliance standards.

Staff was able to separately identify the 2007 expected savings from codes and standard as follows:

2007 Commission Estimate of 2015 Cumulative electric Energy Savings (GWh)

2007 Estimate Savings	2007	2008	2009	2010	2011	2012	2013	2014	2015
Codes (GWh)	0	0	102	95	391	1,862	1,438	1,941	2,459
Standards (GWh)	0	238	663	730	952	913	3,469	4,979	5,488
Total	0	238	765	825	1,343	2,775	4,907	6,920	7,947

In 2007, projected 2015 energy savings due to building code updates assumed three revisions to the building code as follows:

(1) The code update taking effect at the beginning of 2008;

(2) The accelerated adoption of ASHRAE 90.1-2004 requirements into the energy code during 2008;

(3) A future update to the code in 2010 to adopt ASHRAE 90.1-2007.

In addition, the 2007 estimate assumed a compliance rate with the new energy codes to average about 90 percent in 2017 as required by ARRA 2009.

Our current review begins with the code in effect as of 2008 when the EEPS proceeding began. In 2008, ASHRAE 90.1-2004 was in effect;[67] all code updates after 2008 are expected to contribute to the 2015 cumulative energy savings. Subsequent changes include:

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[67] Staff has not reviewed the compliance rates assumed when the 2008 Code update occurred nor could we determine if prior estimates of energy savings had assumed 100 percent (or some lower compliance rate) when ASHRAE 90.1-2004 was incorporated into the Code in 2006.

(1) the 2010 Code update (which now incorporates ASHRAE90.1-2007 in conformance with ARRA 2009), and (2) elimination of the 50-Percent Rule on December 13, 2010.

ASHRAE Standard 90.1-2004 was improved in 2007 and again in 2010. Compared to the 2004 Standard, ASHRAE 90.1-2007 represents a 5 percent improvement in electric energy savings. However, the largest increase to ASHRAE 90.1 occurred in 2010 with an estimated 30 percent over the 2004 Code. ASHRAE90.1-2010 is not expected to be incorporated into ECCCNYS until 2013.

A further change to the NYS Energy Law provides for the elimination of the so-called '50-percent rule.' Previously, unless at least 50 percent of a building system was subject to renovation or alteration, compliance with the Energy Code was not required. An enormous volume of existing building space was therefore not required to comply with the code before this change. Now, any renovation, addition or other modification to a building and building system, are required to comply with the codes. While not every renovation project would have energy code implications, a substantial number of renovations not previously subject to compliance will now result in energy savings.

One more code update is expected to occur in 2013 when ASHRAE 90.1-2010 is incorporated into the ECCCNYS.

Implementation of the code improvements, however, has met with delays. NYSERDA estimates that delays in implementation, combined with the effect of the economic downturn, could result in a shortfall from the 2007 estimate of as much as 2,000 GWh through 2015.

Conclusion

Ambitious federal efforts, combined with improvements in New York's Energy Code and California's adoption of television efficiency standards, could support a conclusion that codes and standards will cause greater savings than estimated in 2008. 2015 cumulative energy savings, however, will be affected by the economic downturn,[68] delays in rulemaking processes, and the likely impact of consumer stockpiling of lighting equipment soon to become

[68] The economic downturn has affected the savings resulting from building code improvements, as building activity in general has declined. However, projects deferred during the downturn may be performed during a recovery and subject to more rigorous standards, resulting in large efficiency savings over the lives of the projects. Thus it is possible that net long term efficiency gains will result from the economic fluctuation.

obsolete. The combined effect of these developments indicates that a cautious approach should be taken to estimating benefits of the new codes and standards during the 2012-2015 time frame. For those reasons, we conclude that the 2008 estimates remain reasonable. The dampening factors described above indicate delay, not elimination, of efficiency savings. The savings that result from codes and standards last for years. Even if such savings are not realized precisely by 2015, the conclusion that improvements in codes and standards will make a large contribution to the statewide efficiency goal remains sound.

Long Island Power Authority (LIPA) and New York Power Authority (NYPA)

LIPA and NYPA are not within the Commission's jurisdiction. They have active efficiency programs, and participate in the Evaluation Advisory Group; however, their efficiency programs are not organized along the same lines as EEPS. We have not attempted to analyze the programs of LIPA and NYPA.

LIPA provides a range of efficiency programs within its service territory, in conjunction with other clean-energy related programs. NYPA offers efficiency programs to public customers. LIPA reports having achieved 70.4% of its cumulative target through December 31, 2010, including generation and transmission efficiencies. Considering only end-user efficiencies, LIPA has achieved 62.4% of its target. NYPA's reported MWh savings through 2010 are substantially lower; however, NYPA notes that many of its projects are large and involve lengthy ramp-up periods before savings are achieved.

Appendix 2. Collections, Expenditures, and Commitments

EEPS Annual Collections from Gas Ratepayers under Current Authorizations

	2008	2009	2010	2011	2012	2013	2014	Total
Central Hudson	307,501	307,501	976,034	1,973,803	65,221	29,466	10,210	3,669,736
Con Edison	4,272,679	4,272,679	25,689,510	31,301,282	906,238	409,426	141,861	66,993,675
Corning	185,809	297,294	3,139	290,006	—	—	4,935	781,183
NYSEG	1,043,319	1,043,319	4,244,147	6,606,852	221,289	99,975	34,640	13,293,541
Niagara Mohawk	1,959,811	6,853,149	12,104,688	17,937,150	415,678	187,797	65,069	39,523,342
O&R	467,019	467,019	1,318,203	2,297,462	99,055	44,752	15,506	4,709,016
RG&E	1,000,540	1,000,540	5,434,789	8,982,773	212,215	95,876	33,220	16,759,953
KEDLI	815,103	815,103	10,696,740	15,388,281	489,992	221,371	76,702	28,503,292
KEDNY	1,262,254	1,262,254	20,289,527	23,790,111	729,695	329,666	114,226	47,777,733
NFG	—	—	5,261,393	6,550,851	368,582	166,521	57,697	12,405,044
SLG	129,708	207,532	(16,306)	276,987	—	—	3,445	601,366
Total	11,443,743	16,526,390	86,001,864	115,395,558	3,507,965	1,584,850	557,511	235,017,881

EEPS Annual Collections from Electric Ratepayers under Current Authorizations

	2008	2009	2010	2011	2012	2013	2014	Total
Central Hudson	2,323,097	9,292,386	12,859,728	14,961,128	509,753	505,877	192,586	40,644,555
Con Edison	14,652,901	58,611,603	117,838,840	131,240,603	3,215,263	3,190,814	1,214,731	329,964,755
NYSEG	5,611,110	22,444,440	22,773,348	23,105,285	1,532,823	1,221,875	465,163	77,154,044
Niagara Mohawk	12,813,756	51,255,023	81,433,942	93,124,339	2,811,701	2,790,322	1,062,265	245,291,348
O&R	1,718,242	6,872,968	9,155,506	10,158,252	352,151	352,151	142,443	28,751,713
RG&E	2,707,645	10,830,581	10,989,304	13,619,422	1,532,953	589,616	224,465	40,493,986
Total	39,826,751	159,307,001	255,050,668	286,209,029	9,954,644	8,650,655	3,301,653	762,300,401

Expenditures and Funds Committed for Energy Efficiency Programs for All Program Administrators Through February 2011												
	Central Hudson	Con Edison	KED-LI	KED-NY	Niagara Mohawk	Corning	NYSEG	NYSERDA	Orange & Rockland	Rochester Gas & Electric	St. Lawrence Gas	Total
Electric Programs												
Expenditures	$6,283,686	$34,593,180	–	–	$61,488,483	–	$3,229,397	$63,545,097	$2,325,244	$3,048,348	$ –	$174,513,435
Committed	$1,921,425	$186,112	–	–	$2,546,078	–	$649,149	$67,281,750	$ –	$1,556,735	$ –	$74,141,250
Gas Programs												
Expenditures	$291,813	$4,022,483	$6,604,905	$5,204,404	$7,736,660	$63,486	$3,262,600	$16,221,423	$632,121	$5,826,561	$89,551	$49,956,007
Committed	$28,396	$114,810	$ –	$ –	$ –	$ –	$497,126	$14,864,884	$11,908	$1,629,822	$ –	$17,146,946
Total Programs												
Expenditures	$6,575,499	$38,615,663	$6,604,905	$5,204,404	$69,225,144	$63,486	$6,491,997	$79,766,520	$2,957,365	$8,874,909	$89,551	$224,469,442
Committed	$1,949,821	$300,922	$ –	$ –	$2,546,078	$ –	$1,146,275	$82,146,634	$11,908	$3,186,557	$ –	$91,288,196

Evaluation Reports Received through 5/1/11

Program	Fuel Type	Evaluation Report	Date Submitted
Central Hudson			
Residential HVAC Programs	Electric & Gas	Process (Phase 1)	4/1/10
Small Business Direct Install Program	Electric	Process (Phase 1)	4/1/10
KEDNY			
Residential HVAC Program	Gas	Process	12/23/10
KEDLI			
Residential HVAC Program	Gas	Process	12/23/10
Niagara Mohawk			
Residential HVAC Program	Gas	Process	12/23/10
Small Business Direct Install Program	Electric	Process	12/23/10
NYSEG			
Residential HVAC Program	Gas	Process (interim report)	1/16/11
NYSERDA			
Business Partners Program	N/A	Process (Wave 1)	6/14/10
Business Partners Program	N/A	MCA Report*	11/16/10
Business Partners Program	N/A	Impact Report*	1/7/11
CFL Expansion Program	Electric	Process/MCA	4/27/10
CFL Expansion Program	Electric	Impact Report*	3/8/11
EmPower NY Program	Electric	Process	7/26/10
Industrial Process Efficiency Program	Electric	Process (Wave 1)	10/14/10
Industrial Process Efficiency Program	Electric	Process (Wave 2)	3/8/11
Industrial Process Efficiency Program	Electric	MCA Report*	6/17/10
New Construction Program	Electric	Process	11/16/10
RG&E			
Residential HVAC Program	Gas	Process (interim report)	1/16/11

* Draft Report

Additional PROCESS Evaluation Reports Expected by the End of 2011

Program	Type	Quarter Expected
Con Edison		
Appliance Bounty Program	Electric	Q3
Multifamily Low-Income Program	Gas	Q2
Refrigerator Replacement Plus	Electric & Gas	Q3
Residential Direct Installation	Electric	Q3
Residential HVAC Program	Electric & Gas	Q2
Residential Room Air Conditioning Program	Electric	Q2
Small Business Direct Installation	Electric	Q2
KEDLI		
Commercial Program	Gas	Q3
Enhanced Home Sealing Incentives	Gas	Q3
Large Industrial Program	Gas	Q3
Multifamily Program	Gas	Q4
KEDNY		
Commercial Program	Gas	Q3
Enhanced Home Sealing Incentives	Gas	Q3
Large Industrial Program	Gas	Q3
Multifamily Program	Gas	Q4
Niagara Mohawk		
Building Practices and Demonstration	Electric & Gas	Q4
Energy Initiative Large Industrial Program	Electric & Gas	Q3
Energy Initiative Mid-size Commercial Program	Electric & Gas	Q3
Energy Star Products & Recycling Program	Electric	Q2
EnergyWise Program	Electric & Gas	Q3
Enhanced Home Sealing Incentives	Electric & Gas	Q3
High-Efficiency Heating and Water Heating Program	Gas	Q3
NYSEG		
C&I Custom Rebate Program	Electric & Gas	Q3
C&I Prescriptive Rebate Program	Electric & Gas	Q3
Multifamily Program	Electric	Q3
Small Business Direct Installation	Electric	Q3
NYSERDA		
Industrial Process Efficiency Program	Electric & Gas	Q3
O&R		
Residential HVAC Program	Gas	Q2
Small Business Direct Installation	Electric	Q2
RG&E		
C&I Custom Rebate Program	Electric & Gas	Q3
C&I Prescriptive Rebate Program	Electric & Gas	Q3
Multifamily Program	Electric	Q3
Small Business Direct Installation	Electric	Q3

Additional IMPACT Evaluation Reports Expected by the End of 2011

Program	Type	Quarter Expected
Niagara Mohawk		
Energy Star Products & Recycling Program	Electric	Q3
Small Business Direct Installation	Electric	Q4
NYSEG		
C&I Custom Rebate Program	Electric & Gas	Q3
C&I Prescriptive Rebate Program	Electric & Gas	Q3
Multifamily Program	Electric	Q3
Small Business Direct Installation	Electric	Q3
NYSERDA		
Asst. Home Performance with Energy Star Program	Gas	Q4
EmPower NY Program	Electric & Gas	Q3
Existing Facilities Program	Electric	Q3
FlexTech Expansion Program	Electric	Q2
Home Performance with Energy Star Program	Gas	Q4
Industrial Process Efficiency Program	Electric	Q4
Low-Income Multifamily Performance Program	Electric	Q4
Multifamily Performance Program	Electric	Q4
New Construction Program	Electric	Q3
NY Energy Star Homes Program	Gas	Q3
Asst. Home Performance with Energy Star Program	Electric (SBC)	Q4
Home Performance with Energy Star Program	Electric (SBC)	Q4
NY Energy Star Homes Program	Electric (SBC)	Q3
RG&E		
C&I Custom Rebate Program	Electric & Gas	Q3
C&I Prescriptive Rebate Program	Electric & Gas	Q3
Multifamily Program	Electric	Q3
Small Business Direct Installation	Electric	Q3

Market Characterization and Assessment (MCA) evaluation collects and compiles descriptive data on the markets served or targeted by a program and describes and quantifies the various market actors and end users involved and their roles in decision making. (Source: NYSERDA)

Process evaluations are intended to assess program design and implementation and are also used to identify opportunities for program improvement and to track program progress.

Impact evaluations quantify energy and demand savings and other potential program impacts such as environmental benefits.

Index of Recommendations

The entire White Paper is put forward for public comment. Following are items specifically recommended. To assist Staff in compiling comments for the Commission's consideration, parties are encouraged to follow the Table of Contents in organizing their submissions.

Recommendations

Staff Responses to O&R and Con Edison Corrections to EEPS White Paper Appendix Tables-July 13, 2011

Staff has reviewed the corrections proposed by Con Edison and O&R to the July 6, 2011 EEPS white paper and found that only the program forecasts for calendar year 2011 shown in Appendix 1, Table 1A, and the impact of the discontinued O&R HVAC program on savings and budgets shown in Table 1 and Appendix 1, Tables 1, 2 and 4, and Figures 3 and 5, require correction. Staff has also reviewed the entries in Tables 1A and 1B for all the other PAs. We found that minor changes were warranted in the Central Hudson target, and the Niagara Mohawk and NYSERDA forecasts.

Con Edison and O&R refer in their July 13, 2011 proposals to a new forecast of 2011 savings that was not available to Staff when the white paper was prepared. We will not incorporate those updates at this time. We anticipate that, prior to Commission action on the white paper other program administrators may want to provide updated forecasts. Therefore it is reasonable to wait until all comments have been received so that any revisions can then be presented to the Commission in a comprehensive manner.

With regard to O&R's Electric Residential HVAC program we note that the budget and MWh target, as authorized in the Commission order issued January 16, 2009, as well as the savings and expenditures, as reported by O&R in the program's monthly scorecards, were included in the white paper performance tables and figures. O&R suggests that the impact of this discontinued program should not be reflected in the data provided in the white paper. We note that, in an Order issued December 21, 2010, which pertained in large part to the calculation of EEPS shareholder incentives, the Commission stated that O&R's combined 2009-2011 MWh target would not include the target associated with the Residential HVAC program. However, the savings reported by the HVAC program are relevant when determining progress made toward achieving the 15x15 goal as shown in Tables 2 and 4, as well as Figures 3 and 5. Nevertheless, we recognize that inclusion of, and comparison to, the full budgets and targets in those tables and figures may lead to misunderstandings. Therefore, considering the small contribution provided by the discontinued program, we will remove data related to the program from this white paper.

All of the other Con Edison and O&R proposed corrections to electric and gas program tables and figures appear to result from a misunderstanding of the data being presented. Con Edison and O&R suggest that the targets, and performance compared to the targets, are incorrect. Con Edison recommends revising the targets in the tables to the 2009-2011 target levels. However, the purpose of the tables is to present performance as of February 28, 2011 to the targets as of that date.[1] The program targets in the tables and figures therefore represent a proration of the overall targets to include only the period ending February 28, 2011.

[1] We recognize that seasonality is not considered in the proration

The corrected tables and figures are as follows:

Table 1: Key Performance Metrics through February 28, 2011 for Statewide Portfolio

		Electric Programs	Gas Programs	TOTAL
Electric Savings	Net Annual* MWh Acquired	1,028,171	657^	**1,028,828**
	Approved Net MWh Target	2,096,373	N/A	**2,096,373**
	Percent of Net MWh Target Acquired	49.0%	N/A	**49.1%**
Gas Savings	Net Annual* Dth Acquired	532,341†	1,555,846	**2,088,187**
	Approved Net Dth Target	N/A	3,461,256	**3,461,256**
	Percent of Net Dth Target Acquired	N/A	45.0%	**60.3%**
Expenditures	Total Expenditures	$ 174,365,533	$ 51,378,110	**$ 225,743,643**
	Total Budget	$ 455,748,806	$ 124,897,270	**$ 580,646,076**
	Percent of Budget Spent	38.3%	41.1%	**38.9%**

* Net Annual savings acquired in the first year after measure/project installation.

^ Three NYSERDA gas programs and a Central Hudson gas program report ancillary electric savings.

† Six NYSERDA Electric programs report ancillary gas savings.

Table 1A Forecast Electric Savings vs. Goals

Program Administrator	Portfolio 2011 MWh Target	MWH Forecasted to be Achieved in 2011	Forecast of Percent Achieved
Central Hudson	28,240	47,678	169%
Con Edison	218,294	228,786	105%
Niagara Mohawk	244,694	311,877	127%
NYSERDA	876,855	922,852	105%
NYSEG	64,829	58,207	90%
Orange & Rockland	21,345	18,564	87%
Rochester Gas & Electric	42,871	44,126	103%
Statewide Total	**1,497,128**	**1,630,744**	**109%**

Table 2: EEPS Electric Program Budgets, Targets and Achievements through February 28, 2011, by Program Administrator

PA	Net Annual* MWh Acquired	Net MWh Target	Percent of Net MWh Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Central Hudson^	16,506	39,955	41.3%	$ 6,274,706	$ 12,941,277	48.5%
Con Edison	74,458	314,483	23.7%	$ 34,593,180	$ 126,027,561	27.4%
Niagara Mohawk	169,210	339,857	49.8%	$ 61,488,483	$ 83,699,902	73.5%
NYSEG	6,522	46,893	13.9%	$ 3,229,397	$ 14,653,337	22.0%
O&R†	8,356	32,643	25.6%	$ 2,186,321	$ 8,993,171	24.3%
RG&E	9,640	26,559	36.3%	$ 3,048,348	$ 8,711,145	35.0%
NYSERDA^	744,135	1,295,984	57.4%	$ 63,545,097	$ 200,722,414	31.7%
TOTAL	**1,028,828**	**2,096,373**	**49.1%**	**$ 174,365,533**	**$ 455,748,806**	**38.3%**

* Net Annual MWh acquired in the first year after measure/project installation

^ Net First-year annual MWh acquired include ancillary electric impacts reported for gas programs

† Performance metrics do not include data related to the company's discontinued Residential HVAC Program. O&R reported that, prior to its discontinuation,the program saved 51 MWh and cost $138,923.

Figure 3: Percent of MWh Targets through 2/28/11 Acquired by 2/28/11

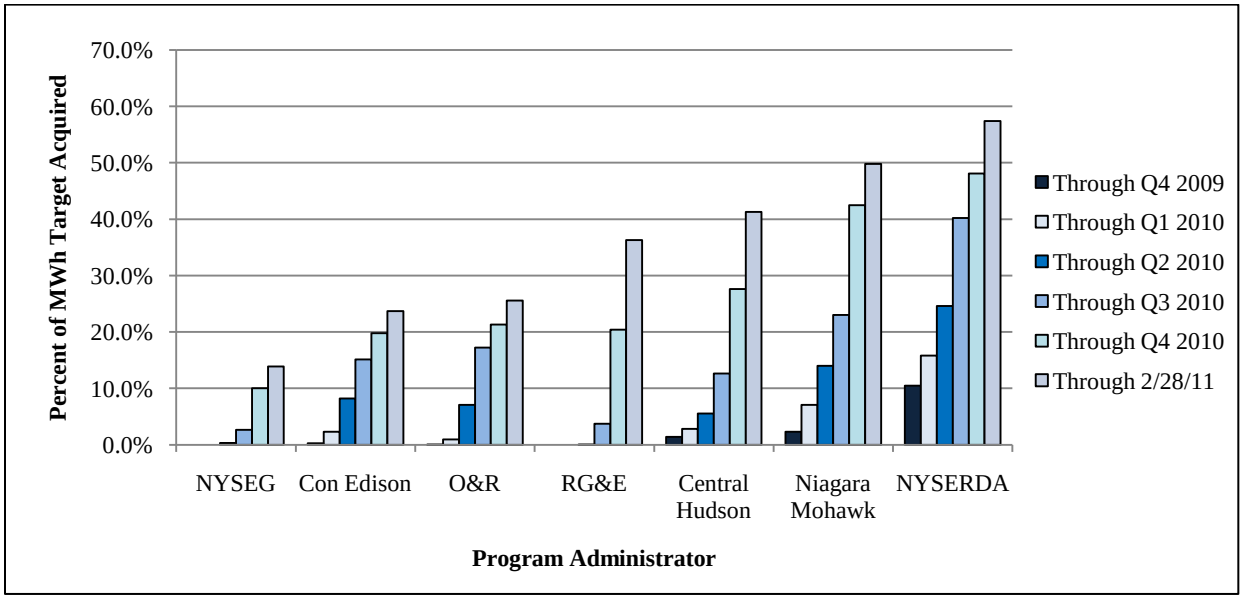

Table 4: Key Performance Metrics through 2/28/11 for Electric Residential Programs, by PA

PA	Net Annual* MWh Acquired	Net MWh Target	Percent of Net MWh Target Acquired	Total Expenditures	Total Budget	Percent of Budget Spent
Central Hudson	3,678	5,084	72.3%	$ 2,121,222	$ 2,898,821	73.2%
Con Edison	3,168	14,058	22.5%	$ 4,960,712	$ 12,812,128	38.7%
Niagara Mohawk	9,233	17,255	53.5%	$ 4,019,220	$ 7,974,180	50.4%
NYSEG	-	2,581	0.0%	$ -	$ 319,202	0.0%
O&R^	-	271	0.0%	$ -	$ 116,704	0.0%
RG&E	-	2,581	0.0%	$ -	$ 319,202	0.0%
NYSERDA	580,448	689,765	84.2%	$ 25,233,383	$ 34,874,058	72.4%
TOTAL	**596,527**	**731,595**	**81.5%**	**$ 36,334,537**	**$ 59,314,293**	**61.3%**

* Net Annual MWh acquired in the first year after measure/project installation

^ Performance metrics do not include data related to the company's discontinued Residential HVAC Program. O&R reported that, prior to its discontinuation, the program saved 51 MWh and cost $138,923.

Figure 5: Electric Residential Sector: Percent of Budget Spent and Percent of MWh Target Acquired through 2/28/11