

New York State Energy Research and Development Authority

---

# NYSERDA's Energy Efficiency Portfolio Standard Program

Quarterly Report to the Public Service Commission  
Quarter Ending March 31, 2013

Final Report  
May 15, 2013





NYSERDA RECORD OF REVISION

<b>Document Title</b>
<p>Energy Efficiency Portfolio Standard Program Quarterly Report                      To The Public Service Commission                      Quarter Ending March 31, 2013</p>

<b>Revision Date</b>	<b>Description of Changes</b>	<b>Revision on Page(s)</b>
5/15/13	Original Issue	Original Issue



## Table of Contents

1 Introduction.....	1-1
2 Evaluation Reports Completed .....	2-1
3 Evaluation Status Update.....	3-1
4 Pending Recommendations.....	4-1
5 Other .....	5-1
Appendix A: Completed Evaluation Summaries .....	A-1



# **1** *Introduction*

---

This quarterly report reflects progress on Energy Efficiency Portfolio Standard (EEPS) Program evaluation activities administered by the New York State Energy Research and Development Authority (NYSERDA). This report contains summaries of recently-completed evaluations and updates on evaluation recommendations and status through March 31, 2013. Information contained within this report comports with the guidance received from the New York State Department of Public Service (DPS) and discussed by the EEPS Evaluation Advisory Group (EAG) in July 2012.





## **2** *Evaluation Reports Completed*

---

No new evaluation studies were completed in the first quarter of 2013. Future quarterly reports will list and summarize studies as they are finalized.



# 3 *Evaluation Status Update*

---

Table 3-1 and Table 3-2 provide the anticipated schedule and status of current and upcoming impact, process and market evaluation activities by program. As applicable, table notes provide further clarification and information about study timing.<sup>1</sup> Planned evaluation projects and timing may change based on input from internal and external stakeholders, and program progress. Likewise, evaluation project schedules are subject to change based on progress in administering the evaluation studies themselves. Future quarterly reports will highlight any timeline revisions. Timeline revisions made this quarter are designated by cell shading.

The New York State Public Service Commission’s December 17, 2012 Order moved Workforce Development Program activities to the NYSERDA Technology and Market Development Portfolio. Therefore, the Workforce Development Program evaluation status is no longer included in these tables.

---

<sup>1</sup> For purposes of these tables, “PY” denotes “program years” and “Q” denotes “quarter.”

**Table 3-1. Impact Evaluation Schedule and Status**

EEPS Program	Impact Evaluation Schedule					
	Detailed Evaluation Plan Submittal	Project Kick-off	Data Collection Complete	Draft Report	Final Report	Notes
Industrial & Process Efficiency (Phase 2)	Completed	Q2 - 2013	Q4 - 2013	Q1 - 2014	Q2 - 2014	Phase 1 impact evaluation report of PY 2009 - 2010 completed in August 2012. Kick-off changed to Q2 2013 from Q1. Pre-retrofit evaluation advisement is ongoing.
Existing Facilities	Late 2013	TBD	TBD	TBD	Late 2014	Previous impact evaluation report of PY 2007 - 2009 completed in September 2012; DPS approved Q4 2012.
Agriculture	Late 2013	TBD	TBD	TBD	Late 2014	Will be evaluated with Existing Facilities.
New Construction	Completed	Q2 - 2013	TBD	TBD	2015	Previous impact evaluation report for PY 2007 - 2008 completed in September 2012. New evaluation will be for projects installed in 2012 and 2013. Kick-off meeting changed from TBD to Q2 2013.
Agriculture Disaster	Completed	Q2 - 2013	Q3/4 - 2013	Q3/4 - 2013	Q4 - 2013/Q1 - 2014	Kick-off moved from Q1 to Q2. Final report may move from Q3/Q4 2013 to Q4 2013/ Q1 2014.
Flex Tech	Completed	TBD	TBD	TBD	2015	Previous impact evaluation report completed March 2012. Evaluation contractors recommend studying the Program every three years. Near-term results are not expected to vary from the study recently completed. Free ridership surveying may begin earlier.

EEPS Program	Impact Evaluation Schedule					
	Detailed Evaluation Plan Submittal	Project Kick-off	Data Collection Complete	Draft Report	Final Report	Notes
Benchmarking	Completed	TBD	TBD	TBD	TBD	Impact evaluation report of the SBC Focus/Vertical Outreach Program benchmarking activities in schools and commercial real estate for PY 2007-2009 was completed in September 2012. EEPS Benchmarking Program launched in December 2011. Evaluations to be included with Flex Tech.
Non-Participant Spillover Study	Completed	Completed	Completed	Completed	Q2 - 2013	Covers commercial existing buildings. Final report moved to Q2 2013; originally Q1 2013.
Multifamily Performance Program	Completed	Q2 - 2013	Q2/3 - 2013	Q3/4 - 2013	Q4 - 2013	Kick-off meeting moved to Q2 2013 from Q1 2013.
Point of Sale Lighting	Q3 - 2012	Q3 - 2012	Q3 - 2013	Q3/4 - 2013	Q4 - 2013	A formal memo presenting these results from several primary data collection efforts will be provided at the end of Q2 2013.
EmPower New York	Completed	Q2 - 2013	Completed	Q2 - 2013	Q2 - 2013 (Phase 1 billing analysis)	Previous impact evaluation report for PY 2007-2008 completed in April 2012. Project kick-off moved to Q2 2013 from Q1. Will complete Phase 1 billing analysis results at end of Q2 2013. Timeline for Phase 2 is TBD.
Home Performance with ENERGY STAR®	Completed	Q2 - 2013	Completed	Q2 - 2013	Q2 - 2013 (Phase 1 billing analysis)	Previous impact evaluation of PY2007-2009 completed in Q4. Project kick-off moved to Q2 from Q1. Will complete Phase 1 billing analysis results at end of Q2. Timeline for Phase 2 is TBD.
New York ENERGY STAR® Homes	Q4 - 2013	TBD	TBD	TBD	Q4 - 2014	Previous impact evaluation of PY 2007 - 2008 completed in September 2012.

**Table 3-2. Process and Market Evaluation Schedule and Status**

EEPS Program	Process and Market Evaluation Schedule					
	Detailed Evaluation Plan Submittal	Project Kick-off	Data Collection Complete	Draft Report	Final Report	Notes
Industrial & Process Efficiency	Q1 - 2013	TBD	TBD	TBD	TBD	Last process evaluation completed in November 2011. Last market evaluation completed in May 2012.
Existing Facilities	Q3 - 2013	TBD	TBD	TBD	2015	Last process evaluation completed in February 2012. Last market evaluation completed in September 2012.
Agriculture	TBD	TBD	TBD	TBD	TBD	
New Construction	Q1 - 2013	Q1 - 2013	Q3 - 2013	Q4 - 2013	Q4 - 2013	Detailed Evaluation Plan in final review with DPS as of March 31, 2013. Market Characterization and Assessment work plan submitted to DPS. Kick-off meeting held with program staff March 7, 2013.
Agriculture Disaster	Q4 - 2011	Q4 - 2011	Q3 - 2012	Q3 - 2012	Q3 - 2012	Previous evaluation completed in October 2012. No other evaluations planned or required.
FlexTech	Q1 - 2013	Q2 - 2013	Q4 - 2013	Q1 - 2014	Q2 - 2014	Last market evaluation completed in August 2011. Study planned in 2012-2014 is a process evaluation only. Project kick-off meeting was extended by one quarter.
Benchmarking	Q1 - 2013	Q2 - 2013	Q4 - 2013	Q1 - 2014	Q2 - 2014	Included in the FlexTech evaluation. Project kick-off meeting was extended by one quarter.
Multifamily Performance Program	Q1 - 2013	Q1 - 2013	Q4 - 2013	Q1 - 2014	Q2 - 2014	Detailed evaluation plan approved January 24, 2013. Process and Market work plan developed and submitted to DPS. In final review process as of end of March 2013.

EEPS Program	Process and Market Evaluation Schedule					
	Detailed Evaluation Plan Submittal	Project Kick-off	Data Collection Complete	Draft Report	Final Report	Notes
Point of Sale Lighting	Q3 - 2012	Q3 - 2012	Q3 - 2013	Q3/4 - 2013	Q4 - 2013	A formal memo presenting these results from several primary data collection efforts will be provided at the end of Q2 2013.
EmPower New York	Q1 - 2013	TBD	TBD	TBD	TBD	Last process evaluation completed in July 2010.
Home Performance with ENERGY STAR®	Q1 - 2013	Q2 -2013	Q4-2013	Q1 - 2014	Q2 - 2014	Evaluation plans under development based on newly available results from the Green Jobs – Green New York Small Homes Evaluation. In addition, evaluation plans will also coordinate with Statewide Residential Baseline. It is anticipated that the detailed evaluation plan will be approved in Q2 2013 with data collection now expected to be completed by Q4 2013.
ENERGY STAR® Homes	Q4 - 2013	TBD	TBD	TBD	2015	Evaluation plans are pending based on forthcoming plans for the Statewide Residential Baseline.
C&I Natural Gas Market Characterization	Completed	Completed	Completed	Q2 - 2012	Q3 - 2012	

### New Recommendations

No new evaluation studies were completed in the first quarter of 2013. Future quarterly reports will present the recommendations generated from finalized studies and characterize them as rejected, implemented, or pending based on input from NYSERDA program implementation and evaluation staff.



## **4 Pending Recommendations**

---

Recommendations from previous evaluations that have not yet been characterized as implemented or rejected in prior reporting are listed, by program, in Table 4-1 through Table 4-7. These tables also provide NYSERDA program staff's response and rationale for the characterization. Note this section does not cover all EEPS programs that NYSERDA administers; only programs with recommendations not previously reported as implemented or rejected are included in these tables.

**Table 4-1. Pending Recommendations: Existing Facilities Program**

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Existing Facilities Program</b>			
Megdal and Associates Impact Evaluation Team, Energy and Resource Solutions Lead Investigators, September 2012	<p><b>Apply a common algorithm for tracking demand savings</b> – The high variance in the peak demand savings realized by the Program stems from inconsistencies in algorithms and requirements regarding peak demand calculations. Evaluators recommend that program staff consider requiring that peak demand be calculated in a consistent fashion across projects. Tracking demand savings using algorithms similar to those applied in the evaluation would ensure more consistent peak demand RRs in future evaluations</p>	Pending	<p>EFP is currently working to update its methodology for calculating peak demand impacts to be consistent with algorithms used in this impact evaluation and to be in compliance with the Technical Manual. Once a new methodology is developed, EFP Staff and Technical Reviewers will be trained on its consistent use</p>
	<p><b>Incorporate heating, ventilation, and air conditioning (HVAC) into lighting analysis</b> – The evaluation results showed that the heating and cooling effects of reduced lighting load and run-time hours can be significant, especially in facilities such as data centers with high cooling loads. Such interactive effects were not consistently incorporated into program savings analysis. Evaluators recommend that the Program consider including these impacts in future project savings estimates. The choice to do so for tracking purposes does not necessarily mean that the same choice must be made for the purposes of demand-based incentive calculations.</p>	Pending, with modifications	<p>The determination of site-specific interactive effects of lighting with HVAC systems is both time and resource intensive relative to its accuracy and resulting effect on program-reported impacts. Program staff proposes working with Evaluation staff to develop a methodology for applying an adjustment for interactive effects between lighting and HVAC as part of future impact analysis.</p>

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Existing Facilities Program</b>			
	<p><b>Set up a data request mechanism from RIPs for future DR evaluations</b>  – Acquiring the DR measure data was challenging and required a lot of calendar time and an unexpected level of “volunteer” work by RIPs. It likely would save effort for all if NYSERDA could persuade the RIPs to deliver to NYSERDA the same baseline and performance data they deliver to the NYISO at the time they send it to the NYISO. Alternately, evaluators and program staff could work with RIPs to establish a different data set and template for routine delivery.</p>	Pending, with modifications	<p>Program staff believes that requiring all incentive recipients to submit DR data routinely would be detrimental to program participation, as the data are sensitive. However, EFP will incorporate into the program language an agreement stating that participants will comply with NYSERDA’s request for event and test performance data if their project is selected in an evaluation sample. Program staff also propose to work together with Evaluation Staff and contractors earlier in the impact evaluation development to secure the data needed directly from participating DR providers.</p>
	<p><b>Create and track premise IDs –</b>  During the evaluator’s population frame development process, time was required to manually screen the population for recent marketing department, FlexTech impact evaluation, process evaluation, and market characterization research contacts with Program representatives, to check for multiple staged projects at a single site and to identify multi-site projects. Site names, addresses, and contact names were used in lieu of a common premise identifier. While this was a manageable exercise for the Phase 1 population size of 70 projects, the exercise will be more daunting as the program expands in the future. To help evaluators and likely aid program administrators as well, evaluators recommend that NYSERDA establish unique premise IDs that are constant</p>	Pending	<p>NYSERDA is developing methods to provide this type of tracking.</p>

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Existing Facilities Program</b>			
	<p>across programs and that remain constant for a facility in the event of name changes or other turnover. The use of premise IDs is not uncommon in the utility environment, whereby a portion of each customer's account number can be the unique premise ID number, and the suffix of the number is the only thing that changes with alterations in account ownership. It is conceivable that NYSERDA could use the utility companies' premise IDs.</p>		
	<p><b>Aggressively involve the program staff in site recruitment</b> – Recruitment for participation in evaluation activities was more difficult for EFP than for other NYSERDA C&amp;I impact evaluations (FlexTech, Industrial and Process Efficiency, New Construction). Including 10% to 20% backups from the non-census strata in the initial recruitment will help eliminate the late scramble to recruit the backup sites and increase the evaluation participation rate.</p>	Pending	<p>Program staff has requested to be involved early in the process of site recruitment and they will be provided a list of the projects that are in the sample as soon as it is available</p>
	<p><b>Use a 0.50 error ratio in the next sample design</b> – The sample design for this evaluation assumed an error ratio of 0.50 on the electric energy savings RR. The final calculated error ratios were 0.58 Downstate, 0.46 Upstate, and 0.49 overall. The error ratio on the permanent demand savings RRs was 0.58 for the same projects. Presuming</p>	Pending	<p>When the next evaluation plan is being developed, the 0.50 error ratio will be included.</p>

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Existing Facilities Program</b>			
	energy savings remains the primary focus and basis of sample designs, 0.50 is a valid assumption to use for electric projects.		
	<p><b>Use the ACL method to estimate the kW reduction for the DR component -</b> The APMD-baseline method overstates DR, and the profile-baseline method is expensive and requires a great deal of vendor cooperation to execute. The ACL-baseline approach, while not a direct measurement of response, is almost as easy to execute as the APMD-baseline method and correlates reasonably well with actual DR indicated by the profile-baseline method and thus is a good compromise. The NYISO ICAP/SCR Program also uses the ACL-baseline method.</p>	Pending	The Existing Facilities DR component is now a Technology & Market Development (T&MD) program. The evaluation recommendation will be forwarded to the T&MD impact evaluation team once that team is under contract with NYSERDA.
	<p><b>Investigate and develop a more reliable method for the estimation of participant ISO and OSO for energy efficiency and OSO for demand response -</b> The SO rates derived in this evaluation use the same method and survey questions as those in past evaluations. The final ISO and OSO estimates end up being based upon a small number of respondents (after dropping those that report no OSO). The NTGR can have a substantial effect on net savings and additional evaluation efforts are needed to reduce the uncertainty in many of its components, particularly in measuring spillover.</p>	Pending	As with other programs, an expanded method will be used to investigate and quantify all types of spillover. The spillover investigation will begin with the identification of causal mechanisms in logic models or other program design sources. Enhanced methods will be utilized to verify reported spillover, including a large number of telephone surveys in 2014 with participating and nonparticipating customers and vendors, and follow up on-site verification for the largest spillover projects reported, presuming the on-site follow-up approach succeeds in impact evaluations being conducted in 2013. The SO samples will be designed to be sufficient to support required confidence and precision levels for estimates of net savings.

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Existing Facilities Program</b>			
	Surveys used to gather data for SO estimation need to include SO-respondent quotas when possible. Additional validity checks need to be included regarding items that act as multipliers within the calculation formulas.		
	<b>Perform SO estimation work within a design that gives full consideration to conducting related market effects studies and follow-up verification studies for SO surveys</b> - This may mean a timeline with staging of different research elements relating to participant ISO, participating vendor SO, and NPSO, all within a context of market change and program-induced market effects. Significantly more resources will be needed to conduct this level of research into SO and market effects.	Pending	The Impact and Process/Market Evaluation teams will closely coordinate efforts to ensure efficient and comprehensive coverage of researchable questions
	<b>Investigate alternative methods for estimating FR</b> – The Program has recently initiated a more concentrated approach to fostering lasting relationships with large key account customers. Consequently, future evaluations could benefit from research into other potential methods for determining FR that better consider program long-term engagement with key account customers.	Pending	The Impact Evaluation Team will investigate methods used in other jurisdictions that provide credit for long-term program influence caused, in part by relationships with large key account customers. Such methods, if warranted, will be used where long-term program influence is relevant.

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Existing Facilities Program</b>			
Navigant Consulting Existing Facilities Program: Market Characterization and Assessment Summary, June 2012	Seek to increase the number of quality firms engaging end users in performance-based EFP projects. In so doing, the program can drive additional competition among firms working on performance-based projects, potentially leading to higher project volumes, lower costs to end users, or new competitive offerings from service providers (e.g., new approaches to project financing).	Pending	<p>NYSERDA's 2013 marketing plans will include a targeted effort directed to participating and non-participating service providers to increase participation among end use customers.</p> <p>Program staff has developed a prioritized list of ESCOs and an ESCO relations role has been developed. Staff has begun the process of meeting regularly with priority ESCO participants to discuss how to increase performance-based work between EFP and the ESCO, and how EFP's design and procedures can be optimized.</p>
	Convince new firms to learn about and undertake projects supported by performance-based incentives by marketing the program's perceived benefits to service providers. Specifically, program participation is an indicator of a firm's advanced capabilities, commitment to maximizing energy savings, and overall higher-quality services. An anticipated increase in demand for high-quality energy efficiency services will create particular opportunities for firms with past performance-based project experience while attracting new firms to attempt performance-based projects.	Pending	<p>NYSERDA's 2013 marketing effort will reflect a research-based approach to identifying and highlighting relevant value messages that increase levels of engagement and interest in NYSERDA performance-based programs among service providers.</p> <p>Among the prioritized list of ESCOs developed by program staff, some have participated in the program in the past, but are currently not active within EFP and some have never participated. An effort has begun to engage these ESCOs and grow the service provider market.</p>
	Adopt a targeted, two-fold approach to increasing performance-based energy savings. (1) Seek organic growth opportunities by marketing additional performance-based projects to facility owners who have previously completed such projects (most of which involved only a single energy-use system).	Pending	The C&I integrated marketing program is designed to increase participation in NYSERDA's core Commercial & Industrial (C&I) programs (including EFP) through a multi media, targeted approach among participating and prospect C&I audiences. For EFP specific efforts, promoting the performance-based opportunities are the priority. Project data has been mined to identify past participants who could benefit from a performance-based approach to energy savings. Marketing efforts are also underway to target specific verticals to increase program

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Existing Facilities Program</b>			
	(2) Capture a portion of small-scale projects being planned by non-participants and convert them to larger, performance-based projects. This will enable EFP staff to capitalize on that portion of the market with at least some awareness of and willingness to pay for efficiency upgrades.		<p>participation in subsectors that demonstrate great potential in terms of energy savings through performance-based projects.</p> <p>In addition, Program staff has begun implementing a key accounts approach to the market, in order to develop long-term relationships with large customers, which will help identify potential project opportunities. EFP's goal is to integrate with customers' long-term planning for energy efficiency and bundle multi-year capital improvements.</p> <p>As part of the key accounts approach, Program staff works with existing customers to identify additional potential project opportunities, focusing on system improvements. Program staff will continue to work with participants to ensure pre-qualified projects are converted into performance-based projects where possible.</p>
Research Into Action, Process Evaluation, February 2012	Focus on providing incentive application status updates to service providers most affected by processing delays. Consider providing automated project status updates to free up program staff resources for other purposes. Support service providers by publicizing the typical length of time for each stage of NYSERDA review.	Pending	<p>NYSERDA is currently integrating its database systems and revising its business process. The new system is planned to include enhanced workflow and applicant communications that will allow service providers access to project status and automate communications at key business process tollgates. To better manage the expectations of its customers and service providers, NYSERDA is also developing the following:</p> <ul style="list-style-type: none"> <li>- A description of the EFP verification process at each toll gate: Energy Analysis Review, which includes the pre-installation inspection, Project Installation Review and Measurement and Verification</li> <li>- A one-page pictorial summary of the verification process that includes a description of deliverables and an estimated timeframe for each toll gate review</li> </ul> <p>These one-page descriptions will be reviewed by Marketing, attached to each contract, handed out at kick-off meetings and posted on the Existing Facilities website.</p>



**Table 4-2. Pending Recommendations: New Construction Program**

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>New Construction Program</b>			
Megdal & Associates – Led by Cx Associates, New Construction Program, Impact Evaluation Report for Program Years 2007 – 2008, September 2012	<p>For projects and measures with large savings, consider including more rigorous commissioning and validation protocols.</p> <p>Also consider including independent third-party M&amp;V as part of Program delivery.</p>	<p>Pending (Investigate options for expanded M&amp;V and/or retro/Cx incentives)</p> <p>Implemented (Engage the impact evaluation contractor in technical assistance (TA) discussions regarding energy modeling baselines)</p>	<p>Commissioning is currently required for all projects with incentives of \$100,000 or greater. Customers may choose the commissioning provider of their choice. Within the context of current budgets and TRC requirements, NCP will investigate options for expanded M&amp;V and/or retro-commissioning incentives as part of program delivery. For larger projects NCP is reviewing the possibility of engaging the impact evaluation contractor in technical assistance discussions regarding energy modeling baselines.</p>
	<p>Consider enabling program staff to use custom hours of operation for new construction lighting projects, or provide deemed hours of operation for various business types.</p>	<p>Pending</p>	<p>TAs currently work with customers to customize hours of operation for each project, based upon predicted building usage. For PQ projects, NY Technical Manual hours of operation are used.</p>
	<p>Accelerate the NCP evaluation cycle so that the evaluations are occurring within two years of project completion.</p>	<p>Pending</p>	<p>Evaluation staff will consider this recommendation when updating plans for the next evaluation cycle.</p>
	<p>The Impact Evaluation Team requests NYSERDA’s support in enabling the evaluators to work with building management to obtain access to residential units and resident utility releases. This support will increase the effectiveness of the outreach effort, control evaluation costs, and reduce the elapsed time for obtaining this information.</p>	<p>Pending</p>	<p>Review of recent program participants indicates that multi-family projects continue to participate in the NCP. As the next round of impact evaluation proceeds the team will work to address this issue.</p>

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>New Construction Program</b>			
	Complete a short study of program changes in the NCP over the past five years and the potential of those changes to affect the project RRs over time. This study should integrate the findings of this evaluation with the findings regarding program delivery and design in the subsequent years.	Pending	This recommendation assumed that there would be more of a gap between impact evaluations. The 2012-13 evaluation has been scheduled to perform direct evaluation on the program changes that have been implemented since 2008.
	Investigate and develop more reliable methods for the estimation of participant OSO. Surveys used to gather data for SO estimation need to include SO-respondent quotas wherever possible. Additional validity checks and follow-up verification studies are needed, particularly for factors that act as multipliers within the calculation formulas.  Significantly more resources will be needed to conduct this level of research into SO.	Pending	The Impact Evaluation Team has included research methods into the causal mechanisms for spillover and plan review based verification of outside and nonparticipant spillover. The resources committed to spillover investigation for the upcoming, 2012-2013, evaluation are significantly higher in comparison to the prior evaluation. The new detailed evaluation plan is anticipated to be finalized in early Q2 2013.
	Consider conducting a market effects study for the NCP and NYSERDA's overall impact on the commercial, industrial and institutional new construction markets in New York. The market effects methods need to attempt to include NCP impacts on market structure and operation that may not be directly identifiable by most market participants but influences the operation of the market since NCP interventions. If SO estimation still occurs or is used, future evaluations must ensure that	Pending	The new detailed evaluation plan is anticipated to be finalized in early Q2 2013 and includes a possible market effects study in 2015. When the 2012-2013 spillover research is complete, the methods and results will be reviewed by DPS, NYSERDA, and the Impact Evaluation Team to determine whether additional research into market effects is needed or whether the market effects have been captured using the new spillover methods.

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>New Construction Program</b>			
	<p>there is not a double counting or overestimation between market effects and SO.</p> <p>Significantly more resources will be needed to conduct an evaluation that provides reliable and rigorous estimates of market effects.</p>		
<p>RIA, New Construction Program (NCP) Process Evaluation, December 2011</p>	<p>While NCP has made substantial progress developing an advanced analysis tool to foster deeper, cost-effective savings for smaller buildings, further steps are needed to finalize and implement the package. Completing this analysis tool should be a high priority, given the surge in smaller building applicants.</p>	<p>Pending</p>	<p>The program continues to work with NCP contractors to incorporate the New Buildings Institute Core Performance Guide (CPG) into the program. The current activity regarding CPG is finalizing an incremental cost process by an NCP contractor, and testing of TRC protocol with CPG outputs. This has proven to be challenging work and has continued since the previous report.</p>

**Table 4-3. Pending Recommendations: Industrial and Process Efficiency Program**

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Industrial and Process Efficiency Program</b>			
Megdal & Associates – Led by ERS Industrial and Process Efficiency Program: Impact Evaluation Report for Program Years 2009 – 2010, August-September 2012	Apply a common algorithm for tracking demand savings.	Implemented	Calculating demand savings will be part of the next technical reviewer training in 2013.
	Incorporate heating, ventilation, and air conditioning interactive effects into lighting analysis where significant impacts are likely and report these and other secondary fuel impacts.	Implemented	Calculating interactive savings for HVAC will be part of the next technical reviewer training in 2013.
	Conduct in-depth primary research on participant SO.	Pending	Primary research on spillover is planned for Phase 2 of this evaluation. In the event that responses indicate significant spillover, the evaluation will use enhanced techniques to validate responses.
	Reassess NEIs in the next evaluation.	Pending	NYSERDA plans to continue with the assessment of NEIs, similar to the Phase 1 study.
RIA, Industry & Process Efficiency (IPE) Process Evaluation, November 2011	The program would benefit from database and application processing upgrades for staff to improve project management, including implementing electronic signatures and better integration of NEIS and Buildings Portal.	Pending	NYSERDA has created a new Performance Management and Evaluation Systems (PMES) department. Also, the Energy Efficiency Services (EES) Operations Unit continues to address changes needed to the multiple database process currently in place. PMES and EES Operations are integrating staffing and responsibilities to optimize reporting, database, and processing upgrades.
	The program would benefit from additional Technical Reviewer support for Western NY and data centers throughout the State.	Pending	NYSERDA will issue a new RFP for Technical Review providers to support EEPSII NYSEDA programs. Contractors will be selected later this year. Feedback from this evaluation will be considered in the TEP process and contract execution.

**Table 4-4. Pending Recommendations: New York ENERGY STAR Homes Program**

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>New York ENERGY STAR Homes Program</b>			
Megdal and Associates, New York ENERGY STAR Homes Impact Evaluation, September 2012	Consider the establishment of a separate development track for projects that are required to meet higher baseline standards. Some developers may be working under mandates to build toward certain level of efficiency (e.g., EPA ENERGY STAR) to comply with federal directives or satisfy funding requirements set by certain lenders and/or government agencies (e.g., HUD, NY state-housing agencies). This separate track may utilize a baseline (UDRH) that is different than the UDRH used for more traditional projects. This track may also have different program incentive structure that encourages certain end uses or certain savings goals over the baseline for this track.	Pending	The Program will consider this recommendation and will conduct a review of NYESH projects submitted to the Program that may meet a higher than code minimum threshold requirement.
	Consider whether changes need to be made to the process for installing screw-in CFLs as a program measure. The responses to the homeowner telephone survey indicated that hardwired ENERGY STAR light fixtures installed during construction remained in place. <sup>1</sup> However, over a	Rejected	Program considered the recommendation, reviewed QA reports and determined that no changes to offering CFLs as an eligible measure are necessary This determination is based on current QA on-site inspections that do not indicate an issue with CFLs and the findings of the impact evaluation are based on self reports dating back four years.

<sup>1</sup> Most hardwired ENERGY STAR® labeled light fixtures (not plug in lamps) require the use of pin-based compact fluorescent light bulbs (CFL) so that the fixture cannot be outfitted with an incandescent light bulb which has a screw-base.

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>New York ENERGY STAR Homes Program</b>			
	<p>third of the homeowners with reported program savings for screw-in CFLs stated that there were no screw-in CFL bulbs in the home when they moved in.<sup>2</sup> All of these respondents were the original owners of the new home. This may imply that the screw-in CFLs were removed prior to the homeowners' residency in the new homes.</p>		

---

<sup>2</sup> Screw-in CFLs can be installed in any light fixture or lamp that accepts standard incandescent bulbs as long as it is compatible with the lighting control (i.e., dimmer switches).

**Table 4-5. Pending Recommendations: Home Performance with ENERGY STAR**

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Home Performance with ENERGY STAR</b>			
Megdal and Associates, Home Performance with ENERGY STAR Impact Evaluation, September 2012	Examine methods for estimating claimed lighting and water heater fuels switching for electricity savings. Further, envelope measures and programmable thermostats for natural gas savings claims should be examined.	Partially implemented 2012	During the report period of 2007-2008, the comparison of actual to modeled consumption was optional. Program contractors are currently required to “true-up” energy models to weather normalized consumption.
	Consider database and data collection enhancements to the Program tracking database as described below. This list of potential enhancements is lengthy and may require substantial time and resources to implement. The items below are listed in order of importance:		
	<ul style="list-style-type: none"> <li>Continue to improve methods to increase the reliability of the utility identification and account numbers.</li> </ul>	Pending	Best practice would be to ensure accuracy of utility information collected by the household and utilize an “ESCO” Electronic Data Interface with utilities or a similar product to assure accurate utility account information.
	<ul style="list-style-type: none"> <li>Ensure data integrity by improving quality control and error checking procedures for the Program database.</li> </ul>	Partially implemented 2011	QC efforts are in place and refinements are on-going.
	<ul style="list-style-type: none"> <li>Consider adding more detailed household information to the primary program database, such as house type, ownership status, number of occupants, adults and adults 65 and older living in the home most of the year, age of house, presence of central air-conditioning, and approximate age of equipment replaced, rather than keeping this data only in the database maintained by the implementation contractor.</li> </ul>	Pending	The program implementer’s database is capable of collecting any/all of information specified in this recommendation. Currently available in the program implementer’s database, but not required in all cases, is the age of home, number of occupants, age of equipment, and presence of CAC. Upon request, the implementation contractor could transmit this data to CRIS. The program will assess the value of collecting additional information.

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Home Performance with ENERGY STAR</b>			
	<ul style="list-style-type: none"> <li>Continue efforts to collect more information on customer decision-making regarding equipment and the age of the existing equipment replaced through the Program.</li> </ul>	Pending	Program will evaluate the value of requiring the collection of additional information from program contractors.
	Continue efforts with the utilities to ensure that billing data is complete, useful and properly interpreted.	Pending	NYSERDA Evaluation and Program staffs are actively engaged with the DPS and each of the utilities to access and collect participant utility billing data on a routine basis. Experience interpreting data from the various utilities in this and other current evaluations will help streamline effort needed to conduct future evaluations.
	Expand the sample size of participants that are sent to each utility to ensure that billing records are not missed due to being assigned to the wrong utility.	Pending	NYSERDA will expand the participant sample sizes in future evaluations, to the extent possible, when requesting utility billing data from each utility.
	Paying \$100 incentives to non-participating contractors to complete the survey should be included in the initial evaluation design, the work plan and the evaluation budget.	Pending	NYSERDA will consider the need to provide incentives to non-participants when developing future evaluation designs, work plans, and budgets. Understanding the level of incentive necessary to complete this evaluation and the response rates attained will help in planning and budgeting future evaluation studies.
	<p>To increase the reliability of the NTG evaluation, new evaluation designs and verification follow-ups should be explored and implemented and may include:</p> <ul style="list-style-type: none"> <li>Continue to include non-participant SO studies when measuring net effects for HPwES in future impact</li> </ul>	Pending	NYSERDA will, to the extent possible, strive to increase the reliability of the NTG component of future evaluations by exploring new evaluation designs and methods. These efforts may include surveys to assess non-participant SO, market effects and follow-up verification studies, as well as increasing the number, depth and breadth of validity checks.



Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Home Performance with ENERGY STAR</b>			
	<p>evaluations. Surveys used to gather data for SO estimation should be designed to meet quotas for the number of respondents reporting SO.</p> <ul style="list-style-type: none"> <li>• Design future SO evaluations with full consideration to conducting related market effects studies and follow-up verification studies. This approach may mean staging different research elements relating to participant ISO, participating vendor SO, and NPSO, within a context of market change and program-induced market effects. Significantly more resources will be needed to conduct this level of research into SO and market effects.</li> <li>• Design additional evaluation research to increase the number, depth and breadth of validity checks for the NPSO analysis, as this SO component reflects efficiency efforts in the larger market and has a multiplier effect in the calculations</li> </ul>		
	Develop and implement an enhanced evaluation design to learn more about the decision-making process for replacing major equipment, in future evaluation designs.	Pending	NYSERDA will consider and include in future evaluation designs, to the extent possible, multi-faceted approaches to assess homeowner or participant decision-making criteria for replacing equipment.

<b>Source of Recommendation</b> (Contractor, Report Title, Date)	<b>Recommendation</b>	<b>Status</b> (Implemented, Pending or Rejected)	<b>Program Implementer Response to Recommendation and Adoption Decision Rationale</b>
<b>Home Performance with ENERGY STAR</b>			
	Future evaluations desiring to gather information on non-energy impacts need to include measure quotas in survey and sampling design and evaluation cost estimates.	Pending	NYSERDA will attempt to include the assessment of more non-energy impacts, to the extent possible, in future evaluation designs. More specific plans will be developed on this research topic, to the extent it is included in future impact evaluations.
	<b>Evaluation Recommendation for the NYS DPS and New York Utilities:</b> Develop a process to store participant billing records for a specified period rather than allowing older data to be placed in archives on the utilities' regular schedule.  Work with NYSERDA and the utilities' evaluators to develop a standard way to provide billing data thereby placing NYSERDA and utility evaluations on the same level.	Pending	Recommendation forwarded to DPS for further consideration.

**Table 4-6. Pending Recommendations: EmPower New York Program**

<b>Source of Recommendation</b> (Contractor, Report Title, Date)	<b>Recommendation</b>	<b>Status</b> (Implemented, Pending or Rejected)	<b>Program Implementer Response to Recommendation and Adoption Decision Rationale</b>
<b>EmPower New York Program</b>			
Nexant, EmPower M&V, April 2007	Devise a methodology to automate the electronic transfer of results from the EmPower New York Calculator to the EmPower New York database.	Pending	The Program will explore adoption of integrated management software.

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>EmPower New York Program</b>			
Megdal and Associates, EmPower Impact Evaluation, April 2012	Methods for estimating savings for envelope measures (both natural gas and electric) and replacement refrigerators should be evaluated.	Pending	<p>July 2007 changes to improve the accuracy of EmPower savings estimates will have a greater impact in the post-evaluation period in the areas of: (1) Attic insulation: increased the estimated R-value of pre-existing fiberglass insulation in poor condition; (2) Wall insulation: lowered savings estimates to account for wall studs, window framing, and estimated 4% voids; (3) EmPower initiated a system for flagging and correcting high estimated savings as appropriate.</p> <p>In 2010, the program discontinued the use of fiberglass to insulate rim joists in favor of spray foam for both air leakage reduction and insulation.</p> <p>In 2011, the program initiated a practice of core sampling wall insulation to ensure appropriate density.</p> <p>Moving forward, EmPower plans to initiate:</p> <ul style="list-style-type: none"> <li>• Introduction of an advanced air sealing protocol and system for calculating savings based on air leakage reduction. Contractor training is in progress.</li> <li>• Adjustments to energy use thresholds for refrigerator and freezer replacements.</li> </ul>
	Review the fields in the database and data collection processes to assess whether additional information, such as the presence of working air conditioning, could be added to the tracking system. Review the coding of measure descriptions to make it easier to identify fuel switching measures and differentiate attic and wall insulation. Improve error checking methods and frequency to correct tracking system errors in a timely manner.	Pending	<p>EmPower will consider adding data fields to assist future evaluations, including:</p> <ul style="list-style-type: none"> <li>• Secondary heating systems</li> <li>• Separate fields for attic and wall insulation savings</li> <li>• Air conditioning</li> </ul> <p>The program has enhanced the process of data checking by the Program Implementer.</p>

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>EmPower New York Program</b>			
	<p>Consider including indicators of Non-Energy Benefits (NEBs) into future evaluation efforts, a lower cost option than full monetization studies, to aid policy makers' ability to have a more complete viewpoint when decisions are being made regarding low income programs.</p> <p>Monitor ongoing efforts that seek to quantify NEBs so these may be referenced within impact evaluations. This type of referral and indicators of the importance of NEBs to NYSERDA's participants may offer a low cost approach to ensure a socially responsible perspective is not lost in the reporting of savings estimates from sophisticated quantitative impact evaluations.</p>	Pending	<p>NYSERDA will attempt to address more non-energy impacts in future evaluations, to the extent possible. A special non-energy impact evaluation is currently being scoped out.</p>
	<p>Although the Net-To-Gross (NTG) component of the evaluation may not need to be conducted with every evaluation cycle, continuing to measure net effects for EmPower in the future is warranted.</p>	Pending	<p>NYSERDA will discuss the merits of continuing to assess NTG in future EmPower evaluations with DPS. Since most low-income evaluations do not address NTG, and this study found the NTG to be nearly a 1.0, NYSERDA will weigh the benefits and costs of collecting such information in future studies.</p>
	<p>Continue to use survey instruments to inform the billing analysis, assess non-energy benefits and NTG factors</p>	Pending	<p>This recommendation will be considered when designing the next evaluation</p>

**Table 4-7. Pending Recommendations: Green Jobs-Green New York Small Homes<sup>3</sup>**

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Green Jobs-Green New York Small Homes</b>			
NMR Group, Inc., Process Evaluation and Market Characterization and Assessment, September 2012	Ensure that the marketing message to homeowners emphasizes the program benefits of saving on energy bills or saving energy. In order to support this effort, NYSERDA could provide sample data on potential net savings, in terms of financing costs and monthly savings on energy costs for different types of homes. Design interactive and educational tools to assist and engage the homeowner in understanding the potential efficiencies is another approach that could be taken.	Pending	Program staff are considering the benefits and costs of developing an interactive online energy audit tool for homeowners to learn about energy efficiency and the Home Performance with ENERGY STAR Program.
	Improve the tracking and presentation of HPwES contractor information to customers. Explore incorporating additional software functionality which would allow the NYSERDA website to list or sort contractors by distance from home and languages spoken. Examples of other search criteria that NYSERDA could consider include the number of HPwES projects completed, types of measures implemented, any quality assurance and quality control information that is not confidential, and customer satisfaction rating.	Partially Implemented	Downstate CBOs are allowed to make direct referrals to HPwES contractors. NYSERDA has developed a written process under which NYC-based CBOs may conduct customer referrals.  Program staff is developing a customer satisfaction survey that would be combined with contractor profile information to offer customers better guidance on selection of a contractor.

<sup>3</sup> Utilizing the existing infrastructure of the EEPS Home Performance with ENERGY STAR (HPwES) Program, Green Jobs – Green New York (GJGNY) funding provides free or reduced-cost energy audits, and low-interest financing to homeowners for the installation of HPwES-eligible, energy efficiency measures and eligible solar hot water systems. Though the study referenced in this table was supported by the GJGNY evaluation budget, the study is included in this report given its connection with the EEPS HPwES Program.

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Implemented, Pending or Rejected)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<b>Green Jobs-Green New York Small Homes</b>			
	For customers lacking web access, NYSERDA could provide such information over the phone or by mail. <sup>4</sup>		
	Continue to enhance program data collection, tracking, and cross-contractor integration.	Pending	A software tool is being developed to more efficiently and effectively track projects from customer intake through completion. This tool will also provide enhanced reporting capabilities.
	Consider offering additional seminars and webinars to educate HPwES contractors about the GJGNY low-interest loans. NYSERDA could also provide HPwES contractors with more guidance and better tools to sell the loan and help their customers through the application process. Align these approaches with the CBO effort to educate customers about the loans as well. Although EFS offers customer service and pre-screening, consider using an independent firm, such as EFS, to discuss GJGNY financing information with participants directly.	Implemented	<p>Program staff plan to host a webinar dedicated to financing. In addition, training for call center staff is planned.</p> <p>EFS is also available to discuss GJGNY financing information with participants directly.</p> <p>The Building Performance Contractors Association is delivering a series of contractor training sessions across the state to answer contractor questions when it can and to offer feedback to NYSERDA.</p> <p>The CBOs are now represented at the monthly meetings sponsored by Efficiency First to bring NYSERDA and contractors together to seek solutions to barriers to increased adoption of energy efficiency.</p>
	Develop marketing and educational materials that promote the benefits of early replacement of energy-consuming equipment. Educate HPwES contractors on how best to offer the consumer guidance about the benefits of early replacement.	Pending	This recommendation requires information to support the benefits of early replacement of equipment.

<sup>4</sup> CBOs are undertaking “aggregation,” bringing a collection of eligible homes into the program using the same contractor or contractor team, which should also help to address the issue of finding and selecting contractors. For more information, visit:

[www.nyserderda.ny.gov/Page-Sections/Green-Jobs-Green-New-York-Planning/Advisory-Council/~media/Files/EDPPP/Planning/GJGNY/Advisory%20Council%20Meetings/2010-05-26\\_GJGNY-draft-aggregation-model.ashx](http://www.nyserderda.ny.gov/Page-Sections/Green-Jobs-Green-New-York-Planning/Advisory-Council/~media/Files/EDPPP/Planning/GJGNY/Advisory%20Council%20Meetings/2010-05-26_GJGNY-draft-aggregation-model.ashx)

## **5** *Other*

---

Per the DPS reporting guidance, this section provides an opportunity to report significant activities or events not already reflected in the report. This section is not for reporting routine activities.

There are no other significant activities requiring explanation for the first quarter of 2013.





## ***Appendix A: Completed Evaluation Summaries***

---

No new evaluation studies were completed in the first quarter of 2013. Future quarterly reports will summarize studies in this Appendix as they are finalized.

NYSERDA, a public benefit corporation, offers objective information and analysis, innovative programs, technical expertise and funding to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce their reliance on fossil fuels. NYSERDA professionals work to protect our environment and create clean-energy jobs. NYSERDA has been developing partnerships to advance innovative energy solutions in New York since 1975.

To learn more about NYSERDA programs and funding opportunities visit [www.nyserderda.ny.gov](http://www.nyserderda.ny.gov)

**New York State  
Energy Research and  
Development Authority**

17 Columbia Circle  
Albany, New York 12203-6399

**toll free:** 1 (866) NYSERDA  
**local:** (518) 862-1090  
**fax:** (518) 862-1091

[info@nyserderda.ny.gov](mailto:info@nyserderda.ny.gov)  
[www.nyserderda.ny.gov](http://www.nyserderda.ny.gov)



**State of New York**  
Andrew M. Cuomo, Governor

## NYSEERDA's Energy Efficiency Portfolio Standard Program

Quarterly Report to the Public Service Commission  
Quarter Ending March 31, 2013

**New York State Energy Research and Development Authority**  
Francis J. Murray, Jr., President and CEO