

New York State - Energy Efficiency Portfolio Standard  
Working Group 2 – Program Summaries

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**Program Name:** Clean Energy Initiative (CEI)  
**Working Group Contact:** Dan Zaweski  
**Administering Entity:** Long Island Power Authority (LIPA)  
**Targeted Sector:** All LIPA Customers

Funding years	Funding Source	Total Budget (Millions)	Cumulative Funds Spent (Millions)	Current Annual Expenditures (Year Millions)	Energy Savings		Demand Savings		Total Resource Cost (TRC) Results*
					Cumulative (MWh)	Current Annual (MWh)	Cumulative System Coincident Load Reduction (MW)	Current System Coincident Load Reduction (MW)	
1999-2006	LIPA	\$M	\$195	\$37M (2006)	464,163	101,294 (2006)	175	65.43 (2006)	

\* Or similar measure performance (e.g. TMET). Include description of cost test(s), identify if the analysis is retrospective or prospective and include any reference or links to on-line documents on evaluation as appropriate.

**Program Description** (include links to on-line documents as appropriate):

LIPA's Clean Energy Initiative is one of the most ambitious programs of its kind in the Nation, the Initiative is a 10 year \$355 million dollar commitment to promote clean new electric generation technologies, including all programs below:

**Residential Programs**

*Lighting and Appliances Program*

This program ties into regional campaigns already underway in the Northeast, including the Northeast Energy Efficiency Partnership (NEEP) initiative to make high efficiency appliances and lighting products more readily available and attractive in the market. The program highlights quality, tested products that meet the Environmental Protection Agency's (EPA's) ENERGY STAR® standards. It provides incentives for Long Island Power Authority's (LIPA's) customers to reduce the price premiums for efficient clothes washers and lighting products. It also provides marketing and training assistance to retailers to make stocking and selling energy efficient products easier for them. Over time, the program should make high efficiency choices a routine part of lighting and appliance purchases and sales.

The program vigorously promotes the EPA's ENERGY STAR label that distinguishes the energy performance of select lighting and washing machines that meet the stringent energy efficiency standards set by the EPA and the United States Department of Energy (DOE).

The program also seeks to render a marked increase in the use of ENERGY STAR qualified products purchased on Long Island, resulting in substantial energy savings for LIPA's customers, lower electric utility bills and environmental benefits.

The program is also looking to expand it's offering to include energy-efficient products such as room air conditioners and dehumidifiers.

**Cumulative MWh: 192,590**  
**Cumulative MW: 15.48**  
**Annual MWh (2006): 48,257**  
**Annual MW (2006): 3.75**  
**Annual Spending (2006): \$5.3M (full allocation)**

*Cool Homes Program*

The Cool Homes Program (focusing on residential Heating, Ventilating & Air Conditioning (HVAC)) attempts to increase the opportunities for equipment, sizing, and installation improvements. It promotes higher efficiency equipment by offering incentives for the purchase and installation of high efficiency unitary HVAC equipment. LIPA representatives continue to meet with HVAC vendors, as well as customers, to inform them of the particulars of the program.

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LIPA's Cool Homes Program encourages Long Island consumers to purchase and install energy-efficient Central Air Conditioners (CAC's) and heat pumps by providing financial incentives to offset the equipment's higher initial cost.

The program places an emphasis on educating the Long Island consumer on the benefits of energy-efficient equipment and the importance of quality installations.

The program also places a high priority of training local HVAC contractors on how to proper size and install HVAC equipment, while encouraging the contractors to use energy-efficiency as a marketing tool.

A Quality Installation Verification (QIV) component has been added to the program to ensure CACs installed through the program are operating the most efficiently. CheckMe!, a third-party quality installation verification program, ensures proper refrigerant and air flow levels of each CAC.

***Cumulative MWh: 29,313***

***Cumulative MW: 42.9***

***Annual MWh (2006): 3,210***

***Annual MW (2006): 5.865***

***Annual Spending (2006): \$2.5M***

#### *Residential Energy Affordability Partnership (REAP) Program*

This program utilizes a coordinated effort to reduce the barriers to energy affordability for LIPA's low and moderate income customers. Modeled after other initiatives on Long Island, and successful programs in New Jersey, it works directly with existing weatherization providers and expands their capabilities. The program provides qualifying customers with free installation of cost effective air sealing, insulation, HVAC repair, lighting and other energy saving measures and extensive in home education and counseling.

LIPA's REAP program is dedicated to improving the energy efficiency for low-income customers on Long Island through the direct installation of a comprehensive set of cost-effective efficiency measures with an emphasis on extensive energy education and counseling through a partnership with LIPA.

***Cumulative MWh: 31,659***

***Cumulative MW: 3.917***

***Annual MWh (2006): 5,508***

***Annual MW (2006): 0.643***

***Annual Spending (2006): \$3.4M***

#### *Solar Pioneer Program*

This program provides incentives to LIPA customers to offset a portion of the installation cost of photovoltaic (PV) systems. It links, where appropriate, to regional and national efforts. It also links consumers with vendors (system integrators), and trains field professionals in PV applications. It offers assistance with financing packages with low rates and longer terms.

This program promotes the use of renewable energy through the installation of residential and commercial PV systems. It also seeks to increase consumer awareness and knowledge of PV education through consumer education.

***Cumulative MWh: 6,219***

***Cumulative MW: 2.645***

***Annual MWh (2006): 2,000***

***Annual MW (2006): 0.942***

***Annual Spending (2006): \$7.5M***

#### *Information/Education Program*

The objective of this program is to transform energy use attitudes/behaviors in the residential market toward energy efficiency. The information and materials have been developed to instill the conservation ethic and raise awareness about energy use and the

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environment for residential customers and students. The program components listed below provide customers with information to make informed decisions about home energy use, facilitate decisions to purchase higher efficiency appliances, provide customers with access to energy efficiency information and help them to gain an understanding of energy use within the home:

- 1) Home Energy Analysis (powered by Nexus Energy Guide)
- 2) In Concert with the Environment (school outreach)
- 3) LIPA's Energy Infoline (1-800-692-2626)
- 4) General energy conservation literature

The program enhances and supports new and existing CEI programs through outreach events outside the retail market. This is accomplished by attending various public events where LIPA can showcase the CEI programs. Training is provided to ensure a well-qualified staff is available to provide information and answer customer inquiries. E-mail addresses are also collected and entered into a database for use in future communications with LIPA customers.

***Cumulative MWh: 25,495***

***Cumulative MW: 9.034***

***Annual MWh (2006): 4,606***

***Annual MW (2006): 1.637***

***Annual Spending (2006): \$543,000***

#### *New York ENERGY STAR® Labeled Homes Program*

LIPA's Residential New Construction Program, New York ENERGY STAR® Labeled Homes, seeks to improve the energy efficiency measures incorporated into the residential new construction market. This is a voluntary program that works in close partnership with select builders to increase the energy efficiency, safety and quality of new homes built on Long Island. Built to higher design standards with closer attention to construction details, New York ENERGY STAR® Labeled Homes incorporate proven building science practices and new technologies to strengthen insulation and air sealing properties, lower electrical consumption, and avoid moisture-related problems through ventilation strategies.

The program looks to educate the Long Island new home buyer market on the benefits associated with owning an ENERGY STAR labeled home.

The program works with select builders and supplies a significant amount of training on residential building science. A focus has been placed on strengthening the relationship between LIPA and the Long Island Builders Institute (LIBI). This relationship has helped many of the Townships on Long Island adopt ENERGY STAR Residential New Construction Standards as code ensuring all new applicable residential new construction built within those towns are energy-efficient, durable and provide a safe (and healthier) living environment.

The program also works to build an infrastructure of competent, independent third-party Home Energy Rating Specialists, who provide the technical assistance, testing and certifications of all new ENERGY STAR labeled homes.

***Cumulative MWh: 1,206***

***Cumulative MW: 1.158***

***Annual MWh (2006): 1,015***

***Annual MW (2006): 0.959***

***Annual Spending (2006): \$1.8M***

#### *Home Performance with ENERGY STAR® Program*

Home Performance with ENERGY STAR® looks to transform the way energy efficiency services are delivered to 1 - 4 family existing homes on Long Island. At the program's core is its "house as a system" approach to home improvement contracting. This approach incorporates an extensive building science component, and places a high priority on quality, requiring that participating contractors be certified through the Building Performance Institute (BPI). LIPA currently also offers an enhanced an expanded benefit program for lower income customers through its Assisted Home Performance with ENERGY STAR® program.

***Cumulative MWh: 109***

***Cumulative MW: 0.070***

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**Annual MWh (2006): 109**  
**Annual MW (2006): 0.070**  
**Annual Spending (2006): \$2.4M**

### **Non-Residential Programs**

#### *Commercial Construction Program*

The Commercial Construction Program is LIPA's largest, most aggressive and most complex Clean Energy Initiative program. It promotes the application of a broad range of energy-efficient electric technologies and design opportunities. It is comprised of three components: Prescriptive, Custom and Whole Building.

The *Prescriptive* component provides financial incentives to customers who purchase and install qualifying energy-efficient electric equipment from a list of technologies that exceed both current code requirements and standard practices in the marketplace.

The *Custom* component provides financial incentives to customers who install cost-effective, energy-efficient equipment or make design improvements that exceed those found in Prescriptive. Specifically, Custom targets customers installing equipment that falls between Prescriptive and Whole Building measures/projects.

The *Whole Building* component seeks to achieve the greatest degree of energy efficiency by encouraging building owners, developers and architects to design and construct the most energy-efficient buildings from the onset of a construction project. Whole Building provides incentives for all commercial/industrial equipment replacement, new construction, major renovations and expansion projects in LIPA's service territory.

LIPA also has several other components to this program such as LEED (Leadership in Energy and Environmental Design) incentives and Commissioning, and most recently announced as potential for 2008 are retrocommissioning and a retrofit component.

**Cumulative MWh: 129,854**  
**Cumulative MW: 25.092**  
**Annual MWh (2006): 24,032**  
**Annual MW (2006): 5.077**  
**Annual Spending (2006): \$8.7M**

#### *Retrofit Energy and Capacity Program (RECAP)*

RECAP targets commercial customers, multi-family buildings with more than four apartments, and publicly owned facilities, and looks for retrofit or replacement opportunities that provide money and energy savings for: lighting upgrades (retrofit and new fixtures), Lighting controls, Upgrading HVAC units, Refrigeration upgrades, Motors and VFD's (variable frequency drives), Energy Management Systems and Retro-commissioning of HVAC systems. Participation in RECAP will be facilitated by energy service companies, called ESCOs that LIPA has competitively selected. Five ESCOs who responded to a competitive solicitation by LIPA to deliver capacity and energy savings to LIPA for agreed upon per unit amount are responsible for all aspects of savings delivery. A third party M&V process further verifies savings and allows for payment. .

**Cumulative MWh: 9,545**  
**Cumulative MW: 1.614**  
**Annual MWh (2006): 9,545**  
**Annual MW (2006): 1.614**  
**Annual Spending (2006): \$2.0M**

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### **Multi-Sector Program**

#### *Customer Driven Efficiency Program*

The Customer Driven Efficiency (CDE) Program provides assistance to residential and commercial customers wishing to make energy efficiency improvements not covered in any of the other Clean Energy Initiative Programs. The program provides technical energy analyses and comprehensive audits to assist customers in evaluating potential energy savings opportunities. Where opportunities are shown to be cost effective, financial incentives can be made available. The program targets electric energy efficient measures not covered in LIPA's other conservation program offerings. Through the CDE Program, LIPA also offers incentives for the Not-For-Profit customers. Though these customers can participate in any of LIPA's CEI Program, there are some programs that have enhanced incentives and services specifically for Not-for-Profit customers.

***Cumulative MWh: 17,845***

***Cumulative MW: 2.124***

***Annual MWh (2006): 3,010***

***Annual MW (2006): 0.417***

***Annual Spending (2006): \$539,000***

#### *LIPAEedge Program*

LIPAEedge is a direct load control program targeted at residential and small commercial customers on Long Island. This program is available to LIPA customers who have Central Air Conditioning (CAC) systems installed in their homes or small businesses. LIPA utilizes wireless technology to signal each customer's device in order to curtail load between the hours of 2 PM and 6 PM for no more than seven times during the summer (LIPA declared Critical Days). In addition, residential pool pumps are controllable through this program.

***Cumulative MWh: n/a***

***Cumulative MW: 44.468***

***Annual MWh (2006): n/a***

***Annual MW (2006): 44.468***

***Annual Spending (2006): \$2.3M***

### **Demand Response Program**

#### *Peak Reduction Program*

The Peak Reduction Program is a load management program, which is designed to encourage LIPA customers to reduce their electric usage during peak demand periods. Specifically, eligible LIPA commercial and industrial customers are provided incentive payments when they temporarily reduce their peak electrical demand in response to requests to do so from LIPA. Customers can effectively shed this load by switching to back-up onsite generation, shifting production schedules to non-peak periods, or reducing lighting and cooling at the facility.

***Cumulative MWh: n/a***

***Cumulative MW: na/***

***Annual MWh (2006): n/a***

***Annual MW (2006): n/a***

***Annual Spending (2006): \$14M***

### **Relationship to Staff Preliminary Proposal:**

**Current status** (include statement on where this program is in its life cycle/MT timeline, current trends, projections, whether the program is over/under/fully subscribed, customers served)

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### **Barriers, challenges, gaps:**

#### **Residential Programs**

**Lighting and Appliances Program** - Residential lighting is one of the most cost-effective programs offered by LIPA. The risks associated with this program are minimal. Cost effective and quality CFL replacements for dimmable R40 reflector bulbs remains a challenge. Additionally, good data on overall sales and specific technology segments continues to remain an obstacle.

**Cool Homes Program** – The additional requirement of quality installations including Check Me coupled with attempts at eliminating contractor incentives have led to a decrease in program participation – additionally, the use of non-standard software by certain national installers has presented problems with their potential participation in the program..

**Residential Energy Affordability Partnership (REAP) Program** - LIPA's REAP program is different from the majority of other CEI programs as REAP is not a market transformation program. Risks associated with this program are extremely minimal. Due to the sensitivity of efforts to reach the target audience for REAP, reaching 4,000 customers on an annual basis has proved to be a challenge.

**Solar Pioneer Program** – Photovoltaic incentive programs are rarely able to pass cost-effectiveness screening, but remain a policy objective based upon their future potential. This technology has gained momentum in the market place and requires a long-term financial commitment in order to one day become cost competitive.

**Information/Education Program** - This risks associated with this program are minimal, while confirmed energy savings are difficult to measure.

**New York ENERGY STAR® Labeled Homes Program** - The adoption by many of the Towns on Long Island of “ENERGY STAR Residential New Construction Standard” during 2006 has posed certain challenges with respect to everything from use of the Energy Star brand on non-voluntary construction, to bifurcated incentive strategies and the need for rapid development of a sizeable HERS rating infrastructure.

**Home Performance with ENERGY STAR® Program** - This program which is one of the newest additions to LIPA's CEI portfolio of programs and has not taken off as expected. The percentage of overall electric savings is small compared to total energy savings. Additionally, the need for sales training and the development of trade affiliations to ensure comprehensive solutions are delivered is beginning to arise. Lastly, we are revisiting the marketing model, as consumer demand is not at the levels expected.

#### **Non-Residential Program**

**Commercial Construction Program** – While the program design allows for virtually any new construction opportunity to be addressed, the challenge resides in ensuring that potential customers know about the availability of the program at the earliest possible time and that certain amount of customer hand-holding continues throughout the process to ensure that comprehensive portfolio solutions are not whittled down to purely lighting measures. While plans for the future will remedy the situation, in the past the use of this program, which was designed basically for new construction, to meet the needs of retrofit opportunities limited the amount of energy efficient retrofit work undertaken.

**Retrofit Energy and Capacity Program** – Results of this program have been dramatically lower than planned. The tradeoff of no penalties to ensure robust ESCO subscription and a hoped for reduction in added price premiums left no effective means of ensuring that ESCO's strived to obtain proposed levels of savings. When projects were completed, the level of comprehensive measures was substantially less than originally proposed and thus more was paid for lighting than necessary and longer payback opportunities were left wanting. Additionally, there was a certain level of local contractor concern as the incentives only flowed through the five ESCO's and thus in order to access the program, subcontractors were not able to act as independently as they general would. Lastly, since the contracts were directly between the ESCO's and the customers, LIPA had no effective means to ensure that its customers were receiving their fare share of the relatively generous incentives that LIPA was paying for per unit savings..

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### **Multi-Sector Programs**

**Customer Driven Efficiency Program** – The majority of this program is comprised of commercial customer audits and assessments. Ensuring that these documents end up with the correct customer decision maker and that a follow-up procedure is in place and carried is extremely important.

**LIPAedge Program** – We find LIPAedge to be a very reliable and dependable tool for delivering voluntary customer load curtailment during critical use days and at the Peak 2PM to 6PM time period. Its ability to be utilized as a tool for longer duration curtailments over a larger number of days was met with less than favorable customer response