LIPA

Clean Energy Initiative

Quarterly Report

(July – September 2004)

Programs Implemented

LIPA's Clean Energy Initiative currently consists of several efficiency programs as well as a number of research, development and demonstration (RD&D) projects. The current Clean Energy Initiative consists of the following:

Residential

Cool Homes
LIPA e***dge***
Lighting & Appliances
Residential Energy Affordability Partnership (REAP)
Solar Pioneer
New York ENERY STAR Labeled Homes

Non-Residential

Commercial Construction

Multi-Sector

Customer-Driven Efficiency
Information/Education

Residential Lighting & Appliances (RLA) Program: LIPA's Residential Lighting & Appliances Program proudly sponsors ENERGY STAR® - the name that means energy efficiency. LIPA encourages customers to buy appliances and lighting products that have earned the ENERGY STAR® label. This voluntary labeling program is sponsored by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE). LIPA's program is designed to build continued customer awareness and market demand for ENERGY STAR® lighting and appliances that help lower monthly utility bills, reduce air pollution and offer better performance than less efficient products. ENERGY STAR® retail partners help promote the program by labeling qualified products in their stores, displaying point-of-purchase materials and brochures, offering promotions on ENERGY STAR® products, and advertising in flyers and newspaper supplements.

When purchasing ENERGY STAR® products, be assured that the Environmental Protection Agency (EPA) and Department of Energy (DOE) have given their stamp of approval for products that meet stringent energy efficiency standards while saving you money, energy and helping to protect the environment. Through LIPA's Clean Energy Initiative efforts, 100% of Long Island appliance retail stores now carry refrigerators, dishwashers and clothes washers that bear the ENERGY STAR® label.

- Lighting rebates for fixture and torchiere in 2004 are $15 respectively and Compact Fluorescent Lightbulb (CFL) rebates are $2.

- The clothes washer mail-in rebate program is $50 for 2004.

Third Quarter Highlights

Promotions - LIPA Residential Lighting & Appliance Program representatives continued to actively coordinate appliance training sessions in stores this quarter. In an effort to combine the ENERGY STAR® message with Change-a-Light, LIPA reps guided both employees and consumers through product knowledge training and in-store promotions. These were conducted at Home Depot in East Meadow, Riverhead and Bay Shore and at Lowe's in Medford. Also participated in several Fire Safety presentations at Home Depot in Farmingdale, Coram, and Huntington.

Energy Star Rewards - The "Energy Star Rewards " Clothes Washer rebate promotion launched on April 15, 2004 concluded July 15, 2004. The promotion was part of the Northeast Energy Efficiency Partnership (NEEP) regional effort. The following manufacturers were participants in the promotion: ASKO, Eurotech, Frigidaire, Fisher & Paykel, GE, Maytag, LG, Bosch, Equator and Miele. LIPA customers who purchased select ENERGY STAR® qualified clothes washers between April 15 and July 15, 2004 are eligible to receive between $75 - $100 back by mail ($50.00 from LIPA's standard rebate, remaining rebate dollars from the manufacturer). The promotion was being supported by a radio-spot featuring a voice over with Steve Thomas of the PBS, "This Old House" series.

- The Energy Star Rewards Program resulted in over 2,500 clothes washer sales and over $125,000.00 LIPA rebates issued to its customers.

Stay Cool - LIPA in partnership with NYSERDA and NYPA launched its Stay Cool Room Air Conditioner promotion in May. The Stay Cool promotion is the successor to the previous year's Keep Cool Program. This modified program did not feature a rebate as in years past but rather focused on educating consumers with tips to save energy during the summer.

The "tips" message was promoted through point of purchase materials in retail partner stores, an on-line campaign on LIPA and NYSERDA's Web sites, and press releases. Public service announcements promoting the Stay Cool message were also broadcasted on National Public Radio stations throughout Long Island. Retailer feedback on the Point-of-Purchase material (POP) and the advertising has been very positive.

ENERGY STAR® Fixture Show Room Pilot Program

The Long Island Power Authority's Clean Energy Initiative launched the Lighting Showroom Pilot Program in the fall of 2003. Prior to the design and implementation of the program, it was recognized that very few, if any, lighting showrooms in the Long Island market carried ENERGY STAR® qualified lighting fixtures. The pilot program proved to be successful by achieving increased inventory levels of ENERGY STAR® qualified fixtures as well as establishing designated ENERGY STAR® fixture displays within the enrolled showrooms.

Building on the success of the pilot program, Phase II of the Lighting Showroom Pilot Program continued through the third quarter of 2004. All existing showrooms renewed their participation in the program with an additional retailer enrolling. Phase II is designed to stimulate higher sales and gain even more consumer recognition of Energy Star qualified fixtures.

Cool Homes: LIPA's Residential HVAC (Heating, Ventilation and Air Conditioning) Efficiency Program is comprised of: Central Air Conditioning (CAC), Residential Geothermal Heat Pumps, and the Home Performance Service (HPS). The program encourages customers to purchase and install energy-efficient CACs and geothermal heat pumps by providing financial incentives to offset a portion of the equipment's higher initial cost. The program's long-range goal is to encourage contractors/distributors to use energy efficiency as a marketing tool, thereby stocking and selling more efficient units and moving the entire CAC and heat pump market toward greater energy efficiency.

Third Quarter Highlights

- LIPA continued to offer training in Manual J calculations and System Charging and Airflow.
    - Manual J is the industry standard residential load calculation method. The training offers step-by-step examples of properly sizing equipment and also addresses principles of heat transfer. The training teaches HVAC contractors to accurately perform and document cooling load calculations in accordance with LIPA program requirements and reduces oversizing.

    - The System Charging and Airflow course addresses airflow and charging procedures and standards and includes hands-on training in the use of testing equipment.

    - These training courses help contractors qualify for the LIPA Cool Homes rebate program, allows contractors to offer better A/C performance and energy efficiency, reduces customer callbacks/complaints and improves customer satisfaction and comfort. Sixteen students completed Manual J training and 17 students completed the System Charging and Airflow course in 2004. In total, there have been 453 participants (255 for Manual J and 198 for System Charging and Airflow) in this training series.

- The LIPA Cool Homes program inspected over 315 Manual J calculations through the third quarter of 2004. We continue to work with contractors to help ensure compliance with program guidelines and assist in any difficulty in meeting program requirements.

- In conjunction with NEEP (Northeast Energy Efficiency Partnerships, Inc.), LIPA continued the BOC (Building Operator Certification) Course offerings for 2004.

    - A series of eight classes are being offered for Level I classes. The training includes instruction in electrical systems, energy conservation, HVAC, indoor air quality, codes, lighting, preventative maintenance, HVAC troubleshooting and HVAC controls and optimization. Students completing the BOC series are eligible to apply for 5.6 Continuing Education Credits. A total of 26

students were in the process of completing Level I classes during the third quarter of 2004.

- A waiting list has been established to accommodate students interested in registering for Level II classes.

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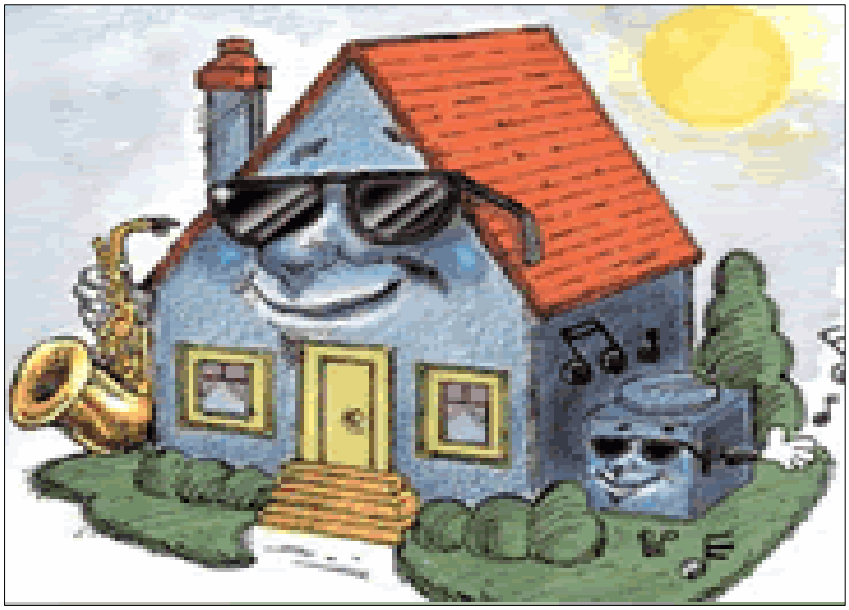
- LIPA customers were reminded to visit www.lipower.org to learn about the Cool Homes program via "LIPA News". This newsletter was mailed directly to LIPA customers as a bill insert and alerted customers about rebate incentives and questions to ask to insure proper installation and sizing of equipment.



LIPA's Commercial Construction Program is LIPA's largest, most aggressive and most complex Clean Energy 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.

Third Quarter Highlights

Implementation

For the period ending 9/30/04 the program's Circuit Riders completed 229 visits to lighting and HVAC distributors/contractors servicing the LIPA territory, investigated 343 customer leads, gave 18 presentations, and completed 9 inspections.

At the end of the third quarter, 98 different contractors participated in the Contractor Incentive Program with a total of 147 paid Prescriptive projects, representing 3,369 mWh of energy savings

Marketing and Presentations

Meeting held with the Town of Southampton to review all LIPA's various products and services. The Commercial Construction Program was of particular interest to Town's engineering department. Discussion centered on the Town's plans for renovations and new construction at their Jackson Ave Office Complex. LIPA will work with the Town in order to provide solutions including appropriate electro-technologies and engage the customer in all of LIPA's products/services.

Presented LIPA's Economic Development and Commercial Construction programs to the Business Development Committee of HIA. HIA is reviving its Front Line Team program whereby representatives from the committee will visit customers who request economic development assistance. The representatives will be trained in the basics of the economic development programs so that they can introduce members of the Long Island Partnership to LIPA's programs and assist the customers to become more energy efficient and profitable on Long Island. Training of the Front Line Team members will be scheduled for late September and the program should be re-introduced to the HIA membership in October.

LIPA's Commercial Construction program presentation was prominently featured at the Neighborhood Network Clean Energy Task Force meeting. The task force is made up of two representatives from each municipality in both Nassau and Suffolk counties. The purpose is to raise awareness of conservation issues in relation to the townships and how to implement and share cost effective conservation measures that have both short-and long-term savings as well as being environmentally friendly.

Program Performance

The following chart shows the actual results (paid applications) for the year-to-date period ending September, 2004:

Category	YTD Actual	YTD Goal
Participants	348	700
MWH	9,556	11,642
MW	1.73	1.59

Presently, there are more than 214 Prescriptive, Custom and Whole Building Design projects in various states of completion, representing an estimated 23 MWH of potential energy savings. It is anticipated that approximately 10 - 13 of the 23 MWH associated

with open applications will be paid in 2004, ensuring that the 19 MWH goal will be either met or exceeded.

Major Projects Completed:

Treeline Management Corporation completed a Prescriptive project installing variable frequency drive motors and building exhaust fans at their location in Carle Place. The total annual energy savings to LIPA from this project is approximately 171,647 kWh with a rebate of $10,000.00 issued

Tosco Pipeline Company, located in Holtsville, completed a Custom project by installing variable frequency drives. The total annual energy savings to LIPA from this project is approximately 160,588 kWh with a rebate of $9,427.00 issued.

Building Management Ltd., located in Syosset, completed a Custom project by installing energy efficient unitary HVAC systems. The total annual energy savings to LIPA from this project is approximately 133,752 kWh with a rebate of $27,182.00 issued.

Combined, these three (3) projects provided customers with $46,609 in rebates and will save LIPA approximately 465,987 kWh and customers approximately 472,706 kWh in energy savings, worth $64,288 annually.

LIPA*edge* Program 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 business. LIPA will utilize wireless technology to signal to 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 on Critical Demand Days. In addition, residential pool pumps are controllable through this program.

Third Quarter Highlights

Program Mode – The LIPAedge program began it's preparations to go into an active commercial installation mode. We began actively marketing to commercial customers via the use of "door to door" marketers. Installations are set to begin in the early part of the fourth quarter.

Program Changes – The residential market will not be actively marketed. If a residential customer wishes to participate in the program they will be offered no financial incentive for joining, they will however, receive the thermostat at no cost. Commercial customers will receive a $50 incentive. Pool pump controls will be installed as requested with a $25 incentive.

LIPA*edge* Activations – The LIPA*edge* program was activated once during the third quarter to test system reliability. The program was activated on August 3rd , a total 18.373 MW was saved.

Freeport Municipal Electric – We continued discussions to provide the Freeport Municipal Electric service territory with the LIPAedge program.

Rockville Centre Electric - Discussions with Rockville Centre Electric to expand the LIPAedge program into the Rockville Centre service territory continued to progress.

Residential Energy Affordability Partnership (REAP) is dedicated to improving energy affordability for lower income households through the direct installation of a comprehensive set of cost-effective efficiency measures, and extensive energy education and counseling.

Third Quarter Highlights

Program Implementation

LIPA and Honeywell agreed to a contract extension during the third quarter.

Strong efforts have been put forth to make up for lost production to meet LIPA's year end participant and savings goals. The August mailing netted over 750 potential participants.

Two new REAP field technicians have been hired and trained during this quarter. In addition, the two members of the staff began training for BPI certification as a BA1 (Building Analyst 1). Certification is expected for both gentlemen by end of year.

REAP representatives participated in the Low Income Energy Forum sponsored by LIPA and KeySpan for social workers and community outreach workers. Attendees were educated about REAP, Assisted Home Performance, KeySpan's On-Track Program, and other programs that would be of interest to program participants and their clients. Forums were held in both Nassau and Suffolk counties.

In the third quarter of 2004, REAP visited 1,315 LIPA customer residences. The following energy efficient measures were installed through the REAP program:

- Replaced 244 inefficient refrigerators with energy-efficient models.
- Installed 8,271 compact fluorescent lightbulbs
- Replaced 41 energy-efficient torchiere lamps
- Installed 86 water aerators
- Replaced 19 window/wall a/c filters and cleaned 153 window/wall a/c filters
- Completed 75 a/c duct repair labor hours
- Air sealed 112 labor hours in 249 eligible homes

The projected energy savings are 1,288.724 annual megawatt hours and .192395 megawatts resulting in approximately $206,240 in annual bill savings.

Marketing

The REAP Marketing Coordinator provided REAP information through workshops, presentations, and one-on-one meetings with representatives of human service agencies throughout LIPA territory, including:

- AARP, Long Beach Chapter
- Community Housing Innovations
- Economic Opportunity Council of Nassau, Healthy Start Program
- Federation of Organizations
- Hermanas Unidas en la Salud / Sisters United in Health
- Nassau County Child Protective Services
- Nassau County Foster Grandparent Program
- Nassau County Office for Senior Citizen Affairs
- Personal Touch Home Care Agency
- Starflower Experiences
- Suffolk County Adult Protective Services
- Suffolk County Office for the Aging
- Suffolk County Senior Umbrella Network
- The Lighthouse Mission
- Winthrop Hospital Pre-Natal Outreach Program

REAP representatives also set up table top displays at community events sponsored by:

- Huntington Assembly of God Fair
- Long Island Cares
- Nassau County Office for Senior Citizen Affairs
- New Hyde Park Community Fair
- New York State Department of Labor
- Suffolk County Office for the Aging
- Suffolk County Summer Senior Picnic
- Town of Islip Senior Fall Ball
- Town of Smithtown
- Westbury AME Zion Community Day

Through the REAP Program, numerous customers were referred to community service organizations, including:

- Access Mental Health
- Al-Anon
- Brookhaven Hospital Hospice
- Catholic Charities NOEP (Nutrition Outreach & Education Program)
- Catholic Charities Parish Outreach
- CDC –(WAP and Assisted Home Performance)

- Child Health Plus
- Dept of Labor One Stop Center
- East End Disabilities Assoc.
- Eat Smart New York (Cornell Cooperative)
- Expanded In-Home Services for the Elderly
- Family Health Plus
- Family Service League
- Good Samaritan Hospice
- Health & Welfare Council
- Hospice Care Network
- KeySpan's On Track Program
- Life Center of Long Island
- Long Island Cares
- Long Island Center for Independent Living
- Long Island Council of Churches
- Nassau & Suffolk Dept. of Senior Affairs
- Nassau & Suffolk Depts. of Social Services
- Nassau County Project Hope
- Nassau Suffolk Law Services
- Rebuilding Together Long Island
- Response Crisis Hotline
- St. Vincent de Paul
- The Mended Hearts, Inc.
- US Marines (Toys for Tots)

LIPA'S Customer-Driven Efficiency Program provides assistance to both residential and commercial customers wishing to make energy efficiency improvements not covered in any of LIPA's other Clean Energy Initiative programs. The program also provides technical, on-site energy analysis and audits to help commercial/industrial customers evaluate potential energy-saving opportunities. LIPA provides financial incentives for those opportunities shown to be cost effective.

Third Quarter Highlights

Energy Audits:
The third quarter of 2004 saw the completion of 50 energy studies. A number of these were of particular interest.

Albanese Development. A number of audits were completed for this company, but the one for 1122 Franklin Ave in Garden City stands out. The indoor environment has no control, which is resulting in a very large amount of wasted energy. As a solution, the auditor recommended a new EMS. In addition, they were in need of a new chiller, but the cost and the payback made this impossible to budget. The audit report combined the measures with the end result being less than a seven year payback with an annual savings of $32,000. The rebates were conservatively estimated at less than $10,000, but it is most likely the case that the custom EMS rebate will be substantially more generous, thus reducing the payback period even more.

Holy Trinity Church. The church asked for an energy audit to assist them with their lighting design. The auditor provided a new design and identified lighting measures that would save 12% of their energy bills. The successful design is now moving forward to implementation and the customer is anticipating an incentive to help pay for the project.

Education and Assistance Center. This small facility in Ronkonkoma is working on a tight budget. The audit identified 16% savings with a payback of 2.8 years. Measures recommended include T8 lighting, lighting occupancy sensors, space temperature controls (programmable thermostats and thermostat lock boxes), and a recommendation to reduce the use of computer monitors during unoccupied periods.

Cablevision. A number of audits were completed for Cablevision. Here are some of the highlights:

- 111 Stewart, Bethpage, $35,000 rebate, $155,000 annual savings, <1.0 year payback.
- 111 Crossways, Woodbury, $10,000 rebate, 2.2 year payback.
- 150 Crossways, Woodbury, $44,000 savings, 0.0 year payback (mostly from implementing a PC and monitor sleep mode policy).
- 310-360 Crossways, Woodbury, $3,000 rebate, 2.8 year payback.
- 420 Crossways, Woodbury, $4,000 rebate, $11,000 savings, 0.6 year payback.
- 1 Media, Woodbury, $3,000 rebate, 1.7 year payback.
- 200 Jericho Tpk, Jericho, $20,000 rebate, $40,000 savings, 5.0 year payback.

These buildings were shown a number of measures including: T8 and T5 lighting, specular reflectors, compact fluorescent lighting, halogen infrared lighting, LED applications, lighting occupancy sensors, reduction of outside air through ventilation controls, controlling unoccupied computer monitor operation, reduction of lighting glare and energy use through modifications to the lighting components, reprogramming of the energy management system, energy efficient motors, and replacement of packaged HVAC units.

St. Pius R.C. School and Church. The school could receive a rebate of $8,000 with an annual savings of $16,000, which is 20% of their energy bill. The church report shows a 37% annual energy savings with a payback of 1.2 years. These opportunities are comprised of the following recommended measures: T8 lighting, specular reflectors, compact fluorescent lighting, halogen infrared lighting, lighting occupancy sensors, an electricity rate change, window replacement, hot water reset controls for the boiler system, and replacement of the rooftop packaged cooling units.

LIPA's Residential Information & Education Program

provides valuable energy-saving information to customers through printed materials, advertising and marketing, media events, a student education component (In Concert With the Environment (ICWE)), an *EnergyWise* Infoline (1-800-692-2626), the LIPA Web site (www.lipower.org) self-directed energy audit services, and LIPA shows and events.

Third Quarter Highlights

Trade Shows and Clean Energy Initiative (CEI) events – LIPA participated in several shows and events during the third quarter, where LIPA distributed Clean Energy Initiative information. The list of events included several REAP sponsored events, street fairs, including Bellmore, and Merrick, and several Fall Festivals. LIPA distributed over 4,898 EnergySmart CDs at these events. All events were successful and well attended.

In Concert With the Environment Program – As the 2004-2005 school year started in September, there are more than 2,290 students registered for the In Concert with the Environment" Program. McDonald's continues to provide sponsorship for the program and LIPA's residential Lighting & Appliance Program continues to distribute a free compact fluorescent bulb to each student that completes the ICWE survey.

LIPA Web site audits – In the 3rd quarter over 6,300 LIPA customers have visited the LIPA Web site to complete a Home Energy Audit. The Web site audit gives the customer the opportunity to evaluate their energy usage and use the audit as a tool for making energy decisions.

Overall, during the 3rd quarter of 2004, LIPA's Web site had more than 765,000 visits. The CEI section alone received roughly 65,200 visits, during this same time period. More specifically, during July, August and September 2004 the CEI section had approximately 22,541, 23,535, 19,125 visits respectively.

During the 3rd quarter of 2004, five (5) media events occurred, highlighting various Clean Energy Programs and the benefits they offer LIPA customers.

Solar Pioneer: LIPA's Solar Pioneer Program is designed to promote the use of clean energy on Long Island through residential PV rooftop installations. To promote the use of PV on Long Island, LIPA is currently offering LIPA residential customers a $4.50/watt rebate for PV systems 10 kW or less, with a maximum rebate of $45,000 per PV installation. LIPA's current incentive at $4.50/watt is being applied towards a 1000 kW incentive block. When the 1000 kW incentive block is depleted, LIPA will continue to offer incentives at $4.00/watt up to 10 kW towards a 1000 kW incentive block. In addition to LIPA's incentives, homeowners can take advantage of New York State's 25% Solar Tax Credit that is applied towards purchased and installed PV equipment. Homeowners may also be eligible for New York State's 15-year property tax exemption towards installed solar energy equipment.

Commercial customers installing PV systems can also participate in LIPA's $4.50 per watt PV incentive, with a maximum rebate of $45,000 per PV installation The New York State Solar Tax Credit does not apply towards commercial PV installations, however, a 10% Federal tax incentive is available, along with a five-year accelerated depreciation of solar energy equipment.

Third Quarter Highlights

Rebate Levels- For the third quarter, the program has provided rebates for 19 participants, for a total amount of $496,880 rebated to customers, equating to 112.14 kW (DC). Additionally, 55 applications were pre-approved by LIPA and pending customer installations equate to applications amounting to 331.07 kW (DC) towards a total rebate amount of $1,481,239.

LIPA has revised its isolation transformer requirements. Originally, all PV installations, regardless of size, required a dedicated isolation transformer. Systems 5 kW and under will no longer require isolation transformers. Isolation transformer requirements are reviewed on a periodic basis.

During this quarter, field visits have been made with some of the solar contractors to resolve customer concerns regarding PV installation methods and radio/TV interference.

Marketing/Advertising

Coordinated a mailing to 443 LIPA Solar Pioneers customers to introduce the Renewable Energy Long Island (RELI) advocacy group. The goal of this mailing was to request existing LIPA Solar Pioneer customers to share their experiences of solar with other customers who are interested in the same technology.

Seminars/Conferences

LIPA was present at the Million Solar Roof Conference in Burlington Vermont held on October 12-13, 2004. Approximately 60 representatives from the northeast attended this conference to discuss industry bench marking, program strengths and weaknesses and the future of solar. Attendees included members from the Dept. of Energy, national utilities as well as solar industry representatives.

Industry/Local Outreach Efforts

Coordinated and participated in a presentation to the Nassau County Code Enforcement inspectors. 132 code officials attended an hour long presentation of LIPA's Solar Pioneer program. Topics included an overview of photovoltaics along with electrical and building code requirements for photovoltaics systems.

NY Energy Star-Labeled Homes

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 program is a collaborative effort between LIPA and the New York State Energy Research and Development Authority (NYSERDA).

Third Quarter Highlights

- Held a joint media event between LIPA and NYSERDA to announce LIPA's newest Clean Energy Initiative program, NY ENERGY STAR® Labeled Homes, at a residential new development in Shoreham. Governor George E. Pataki hosted the event along with LIPA Chairman Richard Kessel and NYSERDA President Peter Smith. In addition to the LI press and local Environmental Agencies, representatives from both the New York State Builders Association and the Long Island Builders Institute were in attendance to promote the program.

- The program was highlighted at the 2004 American Council for an Energy-Efficient Economy (ACEEE) Summer Conference on Energy-Efficiency in Buildings. A paper, co-authored by the program manager, was the subject of a panel session "Residential Buildings: Program Design, Implementation and Evaluation."

- LIPA worked with NYSERDA and the New York State Builders Authority to finalize the 2005 NY ENERGY STAR® Labeled Home program offering. The program will introduce prescriptive energy efficiency measures, a minimum Standard Energy Efficiency Rating (SEER) for Central Air Conditioning units and raise the annual kilowatt-hour savings requirement from 450 to 600 in 2005. In addition, a tiered incentive schedule will be introduced aimed at rewarding higher scores on the Home Energy Rating scale.

Pictured from left to right, NYSBA Executive Vice President, Philip LaRocque, Governor George. Pataki, NYSERDA Chairman Peter Smith, LIPA Chairman Richard Kessel

RESEARCH, DEVELOPMENT AND DEMONSTRATION (RD&D)

Electric Vehicle Programs - GEM Donations

Through a unique arrangement with Daimler Chrysler GEM (Global Electric Motors, LLC) LIPA received the donation of 50 limited-use (legal on any road 35 mph or lower) electric vehicles. The donation of the vehicles contemplated LIPA having them deployed by various municipalities and publicly owned facilities. During the second quarter of 2004, LIPA began delivery of the vehicles to a variety of municipalities and school districts. The only restrictions the recipient of the vehicles has is that they must keep the vehicles registered in New York State for at least one year, they need to maintain LIPA's signage on the vehicles and answer periodic use surveys. All costs associated with the operations and maintenance of the vehicles is the responsibility of the recipient.

The vehicles are an "open-air" design (although either soft or hard doors are available as an option). They come in a variety of colors and styles (they may be either two-seater or four-seater). Using lead-acid batteries, they have a range of about 30 miles at 30 mph. (speed is limited by design and regulation). They are charged with a standard 110 volt, 20 amp circuit available in most homes and businesses and are ideal for short range, local use.

As of the end of the third quarter of 2004, 23 vehicles have been delivered to 14 different entities on Long Island. Agreements for an additional 11 entities have been sent out and are awaiting agreement with the potential participants.

The 50 GEM vehicles can be expected to provide an annual emissions savings of 755 pounds of Hydrocarbons, 5,955 pounds of Carbon Monoxide, 112,125 pounds of Carbon Dioxide and 389 pounds of Nitrous Oxide.

Distributed Generation

Remote Fuel Cell Demonstration Program

In 2002-2003, LIPA installed 17, 5kW combined heat and power fuel cells at various commercial locations within the service territory. These sites were selected based on the willingness of the participant, the proximity to natural gas as well as the electric and heating requirements of the site.

In 2004, the program was expanded to include the demonstration of 13 5kW fuel cells in a residential setting. The demonstration is important since the home is the target market for the 5kW fuel cell. Working with Major Accounts, sites were identified where the owner was a large public entity with several residential homes. The demonstrations will use the new version of the Plug Power 5kW fuel cell which in addition to heat and electricity provides a backup power source. The units will be sited at locations owned by three (3) entities Good Samaritan Hospital, Adelphi University and Winthrop Hospital. Upon site selection, the approval process was begun. All approvals for the three Good Samaritan sites were received in the third quarter of 2004 and construction of the sites was completed. The units will be operational in the fourth quarter of 2004. *Notwithstanding permitting issues it is expected that the remaining sites will be installed by the end of 2004. This phase of the project has generated 300,000 kWh with an estimated reduction in emissions of 1,725 lbs of SO2, 600 lbs of NOx and 426,774 lbs of CO2*.

Tidal Power Project

GCK Technology, Inc. has developed a new generation technology known as the Gorlov Helical Turbine (GHT). The GHT has the potential to produce power bi-directionally from tidal currents. LIPA engaged in a co-funded project with NYSERDA to demonstrate the Gorlov Helical Turbine on Long Island. This demonstration was performed during the third quarter of 2004. The turbine was placed in the channel between Shelter Island and North Haven Peninsula. It had been anticipated that the demonstration would be conducted over a two week period, however, equipment problems not related to the turbine prevented the full testing period from being achieved. The turbine was deployed for a total of nine days and generated approximately 18Kwh of electricity. *The benefits of using tidal energy in power generation are that no raw materials are consumed in the process and there are no waste products. In commercial deployment it is anticipated that the device will be unobtrusive, and energy will be harnessed without damaging wildlife or fauna. Further investigations into potential sites for this technology are under review.*

Microturbine

30kW Microturbine

LIPA issued a Request for Proposal (RFP) that will utilize microturbine equipment to generate energy to feed back into the transmission and distribution system. The RFP asked for Proposers to submit proposals for clean energy projects that will demonstrate the benefits of microturbines in a landfill or biogas application. Under the RFP, LIPA will offer up to five microturbines, two compressors, and a heat exchanger that can be used by Proposer(s) that develop the best concepts. Each microturbine has the potential to produce 28 kW of energy and coupling use of a microturbine with a landfill or biogas application will offset methane generated. The RFP was issued August 2 and request proposals by October 8. The proposal suggests that organizations partner with a government or municipal organization. Operating one 30 kW microturbine will result in a net reduction of 415 lbs of NOx, and a reduction in 1,511 lbs of SO2. Microturbine emissions for CO2 are 417,852 lbs, an increase of 43,998 lbs of CO2.

Microturbine	Yearly Emissions	Displaced Emissions from Generation
• 9 ppm NOx • 40 ppm CO • 9 ppm HC	• 129 lbs NOx • 349 lbs CO • 45 lbs HC	• 544 lbs of NOx • 373,854 lbs of CO2 • 1,511 lbs of SO2

Emissions based on microturbine operating on natural gas fuel at 30kW and 100% availabilitv.

AND SO MUCH MORE …

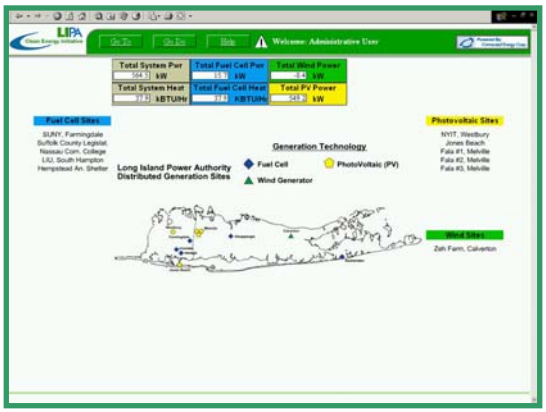
Distributed Generation Monitoring

Working with Connected Energy Corporation (CEC), a monitoring system was built in 2003). The monitoring system is an Internet based technology that can host multiple distributed generation technologies on a common platform. LIPA is developing this technology in partnership with the U.S. Department of Energy, other utilities, and Independent System Operators throughout the county. This common platform is capable of aggregating multiple generation sources to be monitored and in the future dispatched by a single system operator. This technology is capable of storing valuable data on the performance of renewable and traditional technologies. It provides site and equipment overviews down to the specific controls which monitor efficiency and electrical outputs.

The next phase of development this technology will include command and control of distributed generation devices on a secure platform. Additional sites that will support the fuel cell deployment are being developed in 2004, and during the third quarter of 2004 the contract for the DOE funding for this effort had been negotiated.

It is anticipated that new data transmission schemes will be deployed in an effort to achieve reductions in installation costs which will enable this technology to approach commercial viability.

LIPA has this monitoring system currently deployed and encompasses five fuel cell sites, five solar sites and one wind site:



LIPA's "CEC" Site.

- *Farmingdale University (Fuel Cells)*
- *Suffolk County Legislative Building, Hauppauge (Fuel Cells)*
- *Nassau Community College (Fuel Cells)*
- *Long Island University-Southampton College (Fuel Cells)*
- *Hempstead Animal Shelter (Fuel Cells)*
- *Fala Direct Marketing-3 sites (Solar Photovoltaics)*
- *New York Institute of Technology, Westbury (Solar Photovoltaics)*

- *Jones Beach Nature Center (Solar Photovoltaics)*
- *Zeh Farm, Calverton (Wind Turbine)*