









LIPA's Investment in Solar Energy; Benefitting Customers, Communities, & Businesses

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What is LIPA?



- In 1998, the Long Island Power Authority (LIPA) became Long Island's primary electric service provider. LIPA is a municipal subdivision of the State of New York and operates as a non-profit state entity.
 - ▶ LIPA is regulated by a 15 member Board of Trustees who serve a four-year term without compensation, 9 of whom are appointed by the Governor including the Chairman, 3 by the Senate Majority Leader, and 3 by the Assembly Speaker.
 - ▶ In 1998, the Authority acquired all of the common stock of LILCO, where after LILCO became a wholly-owned subsidiary of the Authority and now does business as "LIPA." The Authority conducts its electric business through LIPA, and has the sole authority to direct the management of its business and affairs.
 - ▶ LIPA owns the retail electric transmission and distribution system on Long Island and provides electric service to approximately 1.1 million customers (approximately 900,000 residential & 200,000 commercial) in Nassau and Suffolk counties, and the Rockaway peninsula in Queens.
 - ► LIPA is the 2nd largest municipal electric utility in the nation in terms of electric revenues, 3rd largest in terms of customers served and the 7th largest in terms of electricity delivered.
 - Typically, LIPA has outperformed or is at the top of all other overhead electric utilities in New York State in all three major reliability categories. LIPA does not provide natural gas service or own any on-island generating assets.

LIPA's Mission, Vision, and Values



Our Mission

Our mission is to provide highly reliable and economical electric service through our valued workforce with a commitment to superior customer service, accountability and transparency in all of our operations, while being recognized as a leader in the advancement of efficiency and renewable energy.

Our Vision

The Long Island Power Authority strives to be:

- The most reliable overhead electric utility in the state
- The industry leader in the advancement of energy efficiency and renewable energy
- A responsible steward of the environment
- A catalyst for economic development in the region
- Focused on superior customer service
- The best managed electric utility in the state



2012 New York State of the State Address Investing in Solar While Protecting Ratepayers



"Over the decades, we have aggressively developed our hydroelectric resources and are making great progress in tapping our land-based wind resources. Now it is time to focus more attention on exploiting our solar potential that is designed to meet both goals of expanding production of solar energy and protecting the ratepayer," Governor Andrew Cuomo

The Governor, in his *State of the State Address* called for:

- Increased competitive procurement of large, commercial sized solar projects
- Expand rebate programs for residential & commercial small-tomedium systems
- The NY-Sun Initiative will be capable of doubling the customer-sited photovoltaic capacity that was installed in 2011
- By 2013, it is estimated that the NY-Sun Initiative will quadruple 2011 capacity

LIPA's Solar Pioneer & Solar Entrepreneur Programs



- LIPA's Solar Pioneer and Solar Entrepreneur Programs have provided up-front rebates of over \$122 million for rooftop solar systems
- LIPA has provided rebates for the installation of solar panels on a combination of 4,571 residential and 609 commercial roofs
- LIPA was named among the top ten utilities in the US with the most solar electricity integrated into their energy mix by Solar Electric Power Association. In 2011, LIPA ranked 4th in the Eastern Region & 9th in US
- In 2008, LIPA's budget for solar programs was \$8 million, and every subsequent year the budget has increased to the current 2012 level of \$27 million for implementation of the Solar Pioneer and Solar Entrepreneur Programs
- Programs meet our goals to improve environment, lower cost of solar,
 & transform & sustain a robust solar market to create clean energy jobs

LIPA's Solar Pioneer & Solar Entrepreneur Programs



- Solar Pioneer Program
 - ▶ Rebate for LIPA residential customers is currently set at \$1.75/watt up to system size of 10kW
- Solar Entrepreneur Program
 - ► Rebate for LIPA business customers is currently at \$1.30/watt up to system size of 50kW per unique customer over 12 months
 - ➤ Rebate for LIPA government and not-for-profit customers is currently at \$1.75/watt up to system size of 50kW per unique customer over 12 months
- LIPA Solar Pioneer & Solar Entrepreneur Programs are "Standard Offers" and are enhanced through net metering
 - Open enrollment, upfront incentive program
 - Currently Funded at \$27 million/yr.
 - Serves small-to-medium scale systems (up to 50 kW)

LIPA's Solar Pioneer Program Standard Offer Example



Sample Cost for Average 5,200 watt / 5.2 kW PV System:

Please note: Installed cost may not reflect actual market price

Installed Cost (assumes \$5.80 per watt)	\$30,160
LIPA Rebate (at \$1.75 per watt)	(\$9,100)
Cost after Rebate	\$21,060
Less 30% Federal Tax Credit	(\$6,318)
NY State Tax Credit (Lower of 25% or \$5,000)	(\$5,000)
Total Combined Tax Credits	<u>(\$11,318)</u>
Final Customer Investment	\$9,742

Estimated Annual \$ Saved

Annual Estimated Savings	\$1,297
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Based on output 6,620kWh annually at 0.196 cents / kWh rate

Approximate Simple Payback 7.51 years

LIPA's Utility-Scale Solar Initiative



- This is the Largest Solar Energy Project in New York State
 - ► Through a Request for Proposals issued in 2008, LIPA, working with its public and private partners, has nearly completed a 50 MW utility-scale solar generation project
- Long Island Solar Farm (developed by BP Solar)
 - ▶ 32 MW of solar energy located at Brookhaven National Laboratory
 - Two large-scale arrays, a Laboratory-dedicated array of 1 to 2 MW
 - Solar Research Facility
 - Among the largest solar projects on Federal Land in the United States
- Eastern Long Island Solar Project (developed by enXco)
 - ▶ Up to 7 MW of solar energy on Suffolk County-owned properties
 - Solar energy systems being installed on newly built carports within existing parking lots

Long Island Solar Farm at Brookhaven National Laboratory





Solar Carport (portion) at H. Lee Dennison Parking Lot, Suffolk County







LIPA's CLEAN Solar Initiative Feed-in-Tariff

- LIPA's *CLEAN Solar Initiative* is a feed-in-tariff program (aka, standard offer) in which the owner of an eligible solar photovoltaic (PV) electric system is paid a fixed rate for every solar kilowatt hour generated over the 20-year term of a Purchase Power Agreement between the owner and LIPA.
- LIPA's *CLEAN Solar Initiative* is New York State's first feed-in-tariff program and consistent with Governor Cuomo's call to expand solar energy in the State.
- All of the energy that is produced from solar arrays installed through LIPA's CLEAN Solar Initiative will be fed into the grid and the customer will be paid only for the energy produced.
- The feed-in tariff has been used successfully by other utilities in the United States, Canada, and Europe to encourage solar PV projects and increase the production of renewable energy.

Why Use CLEAN Solar Initiative Feed-in Tariff to Invest in Solar Energy?



- Help meet Governor Cuomo's goal of quadrupling customer-sited PV that was installed in 2011 by 2013
- Expand development of larger PV systems on Long Island & diversify
 LIPA's energy portfolio current rebate program limits size to 50 kW
- Pay for the actual PV performance over a 20-year term
- Enable developer to get project financing through use of LIPA PPA
- No lost revenue impact
- Viewed favorably by Long Island PV contractors
- Facilitates PV growth in manageable sized tranches

What is Budget Impact of the CLEAN Solar Initiative Feed-in Tariff?



- 50 MW (AC) of solar PV at a Feed-in Tariff rate of \$0.22 per kWh would total \$17.5 million per year (\$11.5 million incremental cost with base cost of energy equal to 7.5 cents per kWh)
- Incremental cost of Feed-in Tariff would be 0.57% of overall fuel and purchase power costs
- Incremental cost of purchased power is expected to be phased in over the two-year period (2012-2014) as projects come online
- Incremental cost for an average residential customer would be \$0.44 per month
- Incremental Cost is inversely related to Fuel Costs, as such future increases in forecasted Fuel Costs will reduce Incremental Cost

How is the CLEAN Solar Initiative Feed-in Tariff Program being Implemented?



Eligibility Issues:

- Carve-outs of capacity reservation for systems as follows:
 - 5 MW for solar systems over 50kW and under 150 kW
 - ▶ 10 MW for solar systems between 150 kW 500 kW
 - ▶ 35 MW unrestricted queue for all sizes of solar systems
- Applicant must control site at time of application
- Applies only to new systems built in LIPA service territory after the date of the feed-in tariff
- A time limit with project milestones will be required to insure that projects are built

Tariff/Pricing Issues:

- Standard form of Power Purchase Agreement (PPA) as part of the tariff
- PPA terms and conditions will be non-negotiable