

# 1.0 INTRODUCTION

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## 1.1 Background

The Long Island Power Authority (LIPA) proposes to enter into a power purchase agreement (PPA) with enXco, an affiliate of EDF Energies Nouvelle (formerly SIIF Energies) and a leader in renewable energy, to purchase up to 17.00 megawatts (MW) Alternating Current (AC) of solar energy from solar photovoltaic (PV) facilities to be constructed on public properties in Suffolk County, Long Island and interconnected to LIPA's electric distribution grid. The solar energy to be purchased by LIPA will be produced by enXco via solar PV systems installed on newly built carports within existing parking lots of the County-owned properties.

The enXco Eastern Long Island Solar Project (enXco Solar Project, ESP or Project) is consistent with and integral to LIPA's *2004-2013 Energy Plan* and the *2009-2018 Electric Resource Plan*. The general objectives of the LIPA plans include:

- Adding renewable energy resources to LIPA's asset portfolio.
- Meeting additional generating capacity needs;
- Reducing greenhouse gas emissions and LIPA's carbon footprint; and
- Improving Island-wide electric system reliability.

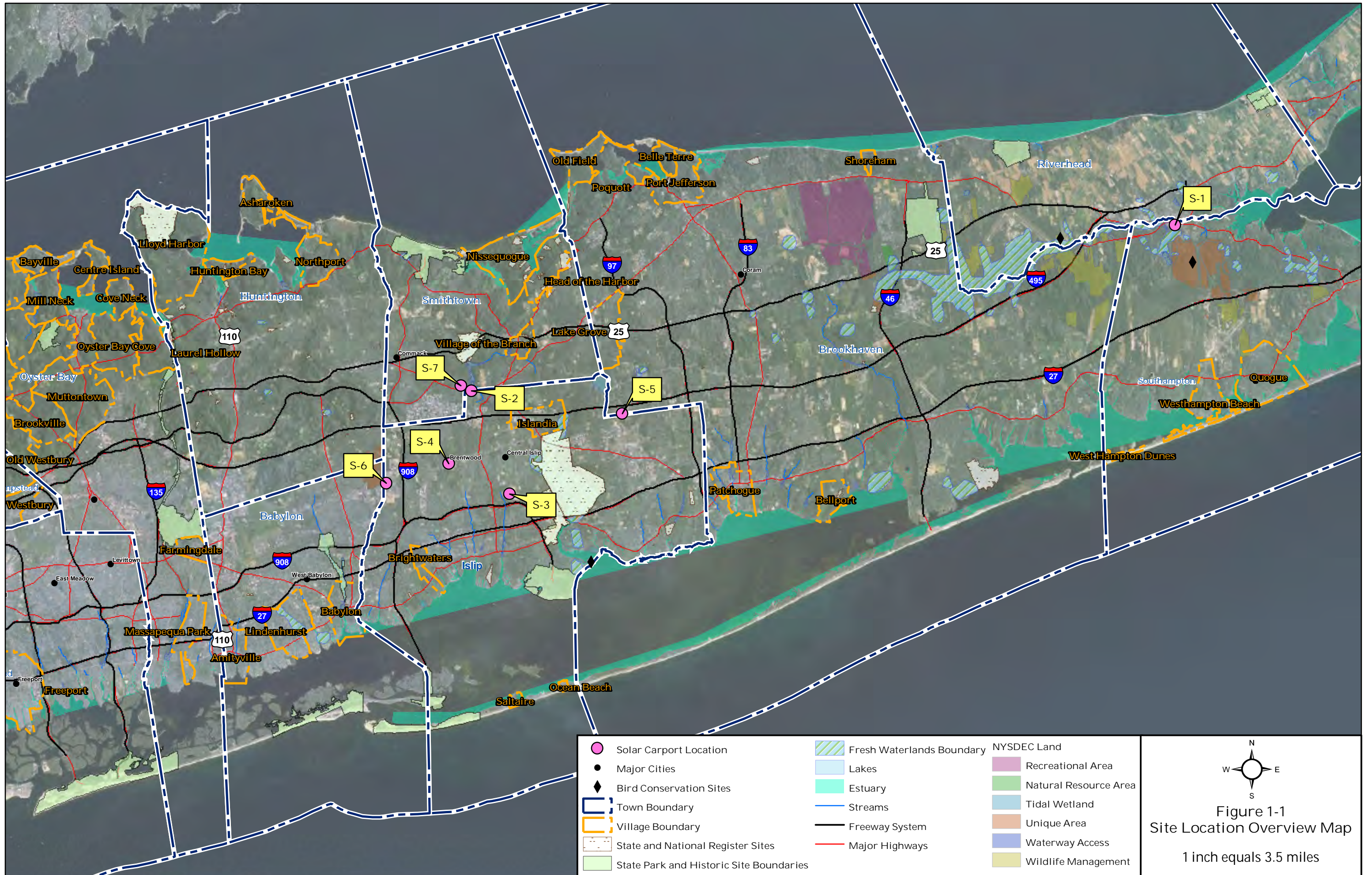
Moreover, the Project is consistent with New York State Governor Paterson's "45 x 15" program that establishes a goal for the State to meet 45 percent of its electricity needs through improved energy efficiency and renewable sources by the year 2015.

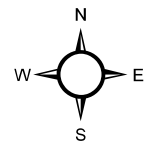
The enXco Project is subject to the State Environmental Quality Review Act (SEQRA), which ensures that State and municipal agencies examine and disclose the potential environmental impacts of an action prior to making a decision. As LIPA proposes to enter into a 20-year PPA with enXco and the solar PV facilities would be sited in LIPA's service territory, LIPA assumed the SEQRA Lead Agency role for the Project.

## 1.2 General Project Description

The enXco Solar Project will consist of sets of solar generating facilities ("SGFs" or "installations"), essentially solar panels in non-tracking (stationary) arrays on mounting systems, installed as part of the carports that will be constructed in the existing parking lots of the Project Sites. The solar modules (panels and mounting systems) will act as the roofs of the carports.

enXco intends to construct up to seven (7) Project SGFs at sites located within Suffolk County. The Project SGF Sites are located within the Town of Southampton (one site), Town of Islip (five sites) and Town of Smithtown (one site), and are shown in Figure 1-1.



  
**Figure 1-1**  
**Site Location Overview Map**  
 1 inch equals 3.5 miles

### **1.3 Purpose and Need**

LIPA released its Request for Proposals (RFP) for Solar Photovoltaic Generating Projects (the “Solar Photovoltaic RFP”) in April 2008 to facilitate the cost-effective, utility-scale development of solar PV generating systems on Long Island and to assist LIPA in meeting its goals under New York’s Renewable Portfolio Standard (RPS). The purposes of the Solar Photovoltaic RFP include:

- Facilitating the investment in solar PV systems within the Long Island region;
- Reducing the costs associated with the consumption of fossil fuels;
- Encouraging economic development within New York State; and
- Improving the environmental quality of Long Island.

On February 26, 2009, the LIPA Board of Trustees selected four ranked proposers and their proposals, including the proposal by enXco to construct and operate solar PV facilities on Long Island.

This Project is part of the overall initiative by LIPA to support and meet the State’s RPS, a policy that seeks to increase the proportion of renewable electricity used by customers. The State’s RPS goal is to annually have 25 percent of the power consumed in-State to be generated by renewable energy resources by 2013. Moreover, LIPA is currently evaluating its own renewable energy resources goal as being 30 percent by 2015 as addressed in its *2009 – 2018 Electric Resources Plan*. This Project will support that effort as well.

The Project will achieve the following LIPA objectives:

- Build upon LIPA’s Clean Energy Initiative (CEI) and Solar Pioneer programs;
- Diversify LIPA’s on-Island energy resources;
- Increase reliability and security of the LIPA generation and distribution system by using a renewable energy source on distributed sites throughout LIPA’s service territory;
- Reduce LIPA’s dependencies on fossil fuels and its current on-Island fossil fueled electric generation resources; and
- Increase LIPA’s renewable energy portfolio and reduce its carbon footprint.

### **1.4 Public Benefits**

The public will benefit from the production of electrical energy without the use of fossil fuels and the emitting of air pollutants. The Project goal of 14.75 MW AC will have the capacity to provide energy to an estimated 1,850 homes and reduce annual carbon dioxide (CO<sub>2</sub>) emissions by approximately 14,300 tons, nitrogen oxides (NO<sub>x</sub>) by 29 tons, and sulfur dioxide (SO<sub>2</sub>) by 35 tons (U.S. EPA website, eGRID2007 Version 1.1). This can also be considered the equivalent of removing approximately 2,447 cars from Long Island’s roads and highways.

The Project will also foster economic development within LIPA's service territory. By making a significant and long-term investment in solar PV systems and purchasing the power generated to help achieve a market transformation, LIPA will assist in reducing the per unit cost of developing these systems in the future. The visibility of these installations throughout Long Island and the public outreach associated with the Project is anticipated to enhance interest in solar; this, in turn, is expected to increase demand for PV, thus helping to lower prices through economies of scale to approach grid parity, and at the same time improving market for local solar suppliers.

## **1.5 Project Outreach**

The LIPA 50MW Solar PV Program has been in the public forum since January 2008 when LIPA identified the program initiative and its objectives. LIPA representatives have met with representatives of State and local governments, agencies, and local interest groups. The intent of the outreach effort was to inform individuals and groups of the need for and purpose of the Program and to solicit and exchange information.

As presented below, enXco representatives have met with county and local governments and agencies to solicit and exchange information on the Project:

- Suffolk County
  - Office of County Executive
  - Department of Environment and Energy
  - Department of Economic Development and Workforce Housing
  - Planning Department
  - Department of Public Works
- Town of Islip
- Town of Smithtown
- Town of Southampton
- MTA / LIRR

Representatives of enXco will continue to meet with various governmental officials, the local community, civic and environmental interest groups, and other interested parties to discuss the Project as it proceeds through Project implementation.

A Project website will also be established that will contain relevant Project information, facts, news/notices and progress updates for website visitors, including project stakeholders.

An open house is being planned in January 2010 for all Project stakeholders and interested public at which county, LIPA and enXco representatives will be available to discuss all aspects of the Project. Once operation commences operation LIPA will provide operational information to the public to enhance and encourage interest in solar PV systems.

## **1.6 Required Agency Actions, Permits and Approvals**

The development of the Project will require the following agency actions, permits, and approvals.

### ***1.6.1 Federal Aviation Administration***

Site S-5: Ronkonkoma LIRR Station will require a clearance from the Federal Aviation Administration (FAA) given its proximity to MacArthur Airport. A Notice of Proposed Construction or Alteration - Off Airport has been submitted to FAA. Approval is anticipated given that the maximum height of the carports is 16.5 feet above ground surface, that existing buildings within the vicinity of the airport exceed that height, and that the solar PV panels are non-reflective with no potential effect on airport operations.

### ***1.6.2 LIPA***

Prior to the authorization by LIPA's Board of Trustees to enter into a Power Purchase Agreement (PPA) and an Interconnection Agreement with enXco, LIPA must comply with SEQRA, which ensures that State and municipal agencies consider all applicable information on the potential impacts of an action before making their decisions.

### ***1.6.3 SEQRA***

On May 15, 2009 (and supplemented on December 1, 2009), LIPA issued its SEQRA coordinated review notification to all known potential involved agencies and interested parties, and requested Lead Agency status for purposes of SEQRA review. All relevant involved agencies, specifically Suffolk County and NYSDEC, consented to LIPA serving as Lead Agency.

### ***1.6.4 New York State Department of Environmental Conservation***

Site S-1, Riverhead County Center Complex, is located within the river area of the Peconic River and Little River, which are both designated as 'recreational' rivers (in this vicinity) under the Environmental Conservation Law (ECL), Article 15 Title 27, 6NYCRR Part 666 – Wild, Scenic and Recreational Rivers (WSRR) System. Therefore, the Project will be subject to the land use and development provisions of WSRR. The ESP is classified as a 'major public utility use', requiring a permit under the WSRR System regulations.

It may be necessary to conduct work within 100 feet of NYSDEC Wetland R-5 near Site S-1, and NYSDEC Wetland C-1 near Site S-2; however, the final site design will endeavor to place as many project components outside the wetland adjacent area as possible to minimize wetland impacts. A freshwater wetland permit will be applied for and obtained, as necessary, resulting in no adverse wetland impacts.

Site S-1 and S-2: H. Lee Dennison Center, are in areas of archaeological sensitivity. A Project Review Cover Form and attachments have been submitted to the Office of Parks, Recreation and Historic Preservation (OPRHP) for a determination of no effect. All construction work will be conducted on previously disturbed areas, most of which are paved; some of the previously disturbed areas are unpaved areas of the site adjacent to parking lots and roadways.

### **1.6.5 Local Actions**

The properties on which the Project is to be constructed are owned by the County of Suffolk and are currently utilized as parking facilities, and as such, are under the County's jurisdictional control. The County is responsible for conducting all reviews and inspections and for the issuance of all approvals and permits in connection with the construction of capital improvements on County properties including, without limitation, the enXco Solar Project. The Suffolk County Legislature must authorize the issuance of a lease agreement with enXco and an access agreement with LIPA. Suffolk County site plans and building permits will also be required for the Project.

## **1.7 Organization of the Environmental Assessment**

This EA evaluates the potential environmental impacts of the ESP (i.e., siting, installation and operation) in accordance with the requirements of SEQRA and its implementing regulation (6 NYCRR Part 617). The analysis addresses all potential areas of impact, including land use, zoning and community facilities, cultural resources, visual resources, socioeconomics and environmental justice, traffic, air quality, noise, infrastructure, hazardous materials, natural resources, electromagnetic forces (EMF), construction impacts, cumulative impacts, and alternatives. It is expected that the entirety of the Project SGFs will be installed and operating within approximately 15 months following receipt of all approvals and permits. The bulk of the work will be completed by the spring of 2011, but no later than February 1, 2012. While this EA examines all seven potential SGF sites, which together can produce up to 17.00 MW AC of solar energy, construction at one or more sites may not be necessary to achieve the Project goal for 14.75 MW AC of solar energy.

Because no material changes in the local environment of the SGFs are expected between now and the commencement of project operation, future conditions without the Project's SGFs are expected to be the same as current existing conditions. Therefore, potential impacts are assessed by comparing build conditions (with the Project's SGFs) to existing conditions. A completed Environmental Assessment Form (EAF) for the Project is provided in Appendix A.

This EA is organized as follows:

- Section 1.0 presents background information and a brief Project description; a statement of the Project's purpose and need and public benefits; a summary of public outreach activities conducted and planned in support of the Project; and a summary of required agency actions, permits, approvals.

- Section 2.0 provides a detailed Project description, including SGF installation and operation; a summary of the Project's anticipated development schedule and a summary of anticipated permits and approvals are also presented.
- Section 3.0 provides a description of existing SGF Site conditions and the assessment of potential Project impacts; the installation and operational effects of the SGFs are described and characterized.
- Section 4.0 provides a brief cumulative impact assessment.
- Section 5.0 addresses Project Alternatives.

Appendices include the following:

- Appendix A includes the Full Environmental Assessment Form (EAF);
- Appendix B includes Agency Correspondence; and
- Appendix C includes the Project Equipment Data with general design specifications for the SGF solar PV modules and carport arrays.