



RESOURCE PLANNING AND CLEAN ENERGY ANNUAL REPORT

May 18, 2022

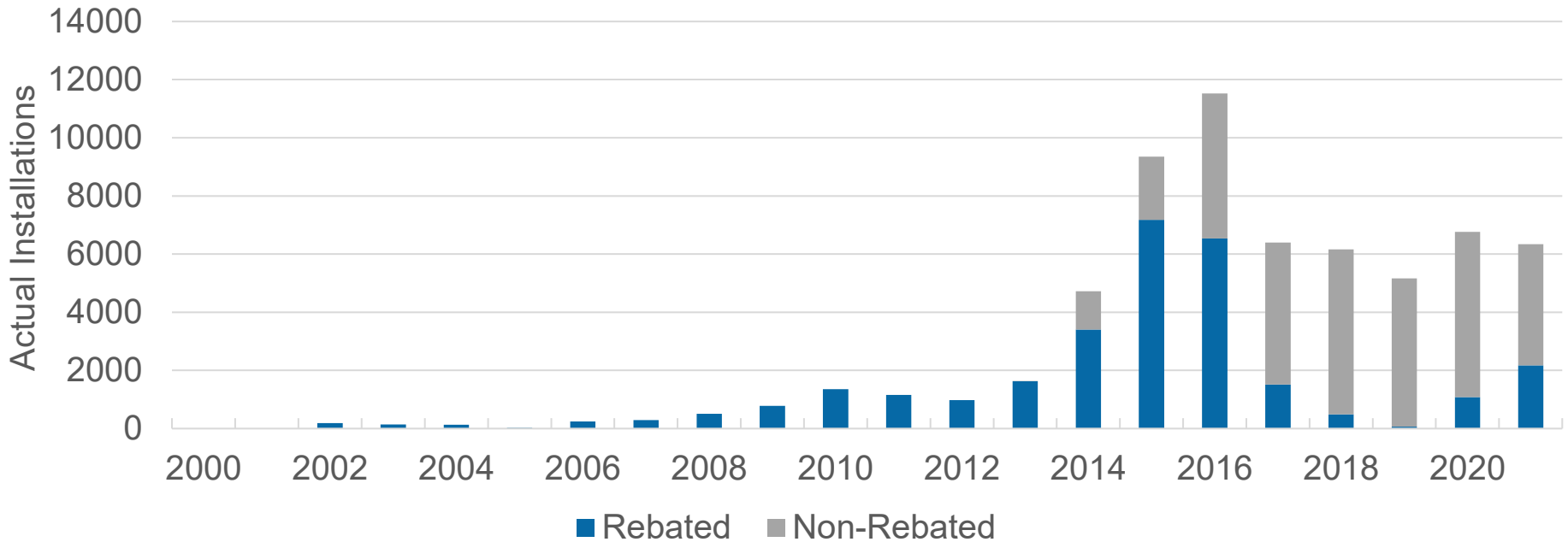
RESOURCE PROCUREMENT ACTIVITIES

Procurement	Date of Issuance	Operational (MW)	Under Development (MW)
FIT I	July 2012	38.8	0
FIT II	October 2013	30.3	1.6
280 MW RFP	October 2013	48.9	0
FIT II (Fuel Cells)	March 2014	6.0	0
South Fork RFP *	June 2015	10	130
2015 Renewable RFP	December 2015	0	58.9
FIT III	September 2016	14.0	4.0
FIT IV (Fuel Cells)	September 2016	7.4	0
FIT V	June 2020	0	20.0
Bulk Energy Storage	April 2021	Pending	Pending
Total		155.4	214.5

* Does not include demand reduction programs.

ROOFTOP SOLAR PROGRAM

As of 12/31/2021, rooftop solar installations totaled 63,859 systems and 505 MW (AC)



**As of December 31, 2021*

CLEAN ENERGY

2021 PSEGLI Bulk Energy Storage RFP

- RFP issued in April 2021 for 175 MW of Energy Storage Resources
- Open to all commercially viable storage technologies
- Proposals received in July 2021
- Expected selection of projects in August 2022

2022 Integrated Resource Plan (IRP)

The IRP will identify:

- Reliable, CLCPA compliant, cost-effective options for meeting future demand
- System changes needed by 2030 with the focus on existing generation
- Solicited and incorporated public comments on the Scope of Work
- Expected completion in Q4 2022, with additional opportunities for public comments

INTERCONNECTION INITIATIVES

- The Y49 cable tripped on March 12, 2022 due to fault at a location in Yonkers. The cable is under repair and is expected to be back in service in May.
- NYPA plans to reconductor the Long Island land-based portion of the Y49 cable with an expected in-service date of June 2023.
- PSEG Long Island is currently working on a short-term extension of the NYPA contract, which is currently set to expire in November 2022.
- The Neptune cable is currently derated to 375 MW due to a transformer failure at the Newbridge substation. A new transformer is expected to be commissioned and the cable is expected to be at 660 MW capacity by August 2022.

FOR CONSIDERATION

May 18, 2022

TO: The Board of Trustees

FROM: Thomas Falcone

SUBJECT: Consideration of Approval of the Annual Report and Amendments to the Board Policy on Resource Planning and Clean Energy

Requested Action

The Board of Trustees (the “Board”) of the Long Island Power Authority (“LIPA”) is requested to adopt a resolution: (i) approving the annual report on the Board Policy on Resource Planning and Clean Energy (the “Policy”); (ii) finding that LIPA has complied with the Policy since the last annual review; and (iii) approving amendments to the Policy, which resolution is attached hereto as **Exhibit “A.”**

Background

By Resolution No. 1372, dated July 26, 2017, the Board adopted the Policy. The last annual report on the Policy was in June 2021, and the last amendments to the Policy were made in July 2020.

The Policy sets objectives for resource planning, power supply procurement, portfolio management, and energy efficiency programs that support LIPA’s purpose and the State’s clean energy goals. The Policy also establishes regular performance reporting by LIPA Staff to enable the Board to assess performance against the objectives of the Policy.

Compliance with the Policy

LIPA Staff recommends that, for the reasons set forth below, the Board find that LIPA has complied with the Policy since the review of the Policy last year.

Planning

“Planning for a power supply portfolio that meets applicable New York State Independent System Operator and New York State Reliability Council requirements, environmental standards, and the State’s clean energy goals; and updating the Integrated Resource Plan to reassess system needs, as necessary, but no less than every five years.”

- Long Island capacity reserves and future additions are expected to meet the New York Independent System Operator’s (“NYISO”) minimum Locational Capacity Requirement (“LCR”) through 2030. The current 2022 LCR of 99.5% of peak load is satisfied mainly with fossil-fueled generation and a smaller contribution from renewable resources. As offshore wind and energy storage resources are interconnected into Long Island, in compliance with the Climate Leadership and Community Protection Act of 2019 (“CLCPA”), the existing

fossil-fuel generation will be phased-out in a manner that continues to satisfy the LCR, which is expected to increase over time as more intermittent resources are added to the system.

- Implementation of the CLCPA will require the total replacement of existing fossil fuel generation by 2040 with renewable energy, energy storage, and other carbon-free technologies.
- The load forecast declines through the mid-2020s and thereafter begins to grow as electrification of heating and transportation takes hold. Projections for electric vehicles and heat pumps, as well as load reductions for behind-the-meter solar and other distributed energy resources, are captured in the 2022 load forecast update.
- PSEG Long Island is currently in the process of developing LIPA's 2022 Integrated Resource Plan ("IRP"), with the scheduled completion by the end of 2022. The IRP will identify preferred options for making the transition to a clean energy grid.
- LIPA plans to meet its share of the State's Renewable Energy Standard through future procurements or Renewable Energy Certificate ("REC") purchases from the New York Energy Research and Development Authority ("NYSERDA"). See the discussion of Clean Energy below.

Managing the Portfolio

"Managing the power supply portfolio to minimize cost and maximize performance, including the economic scheduling of assets, power plant availability and thermal efficiency, within contractual constraints."

- All power supply portfolio contracts met or exceeded contract targets in 2021.
- A contract billing dispute with Cross Sound Cable is the subject of litigation regarding the cable owner's claim for capacity payments related to a six-month outage of the cable.
- NYPA ("New York Power Authority") conducted a life extension and modernization study of the NYPA-owned Y-49 cable from Yonkers to Long Island. NYPA has engaged contractors to re-conductor the land-based facilities on the Long Island side. LIPA's contract with NYPA for the use of the cable is currently scheduled to terminate in November 2022. PSEG Long Island and LIPA are working with NYPA to extend the contract until the Y-49 re-conductoring project is completed.
- LIPA entered into a new capacity purchase to reimburse NYPA for its costs (net of market revenues) to repair and continue to operate the Richard M. Flynn Power Plant (the "Plant"), a 150-megawatt gas- and oil-fired combined cycle generating unit located in Holtsville, which NYPA had planned to retire rather than repair after the generator failed in April 2021. LIPA had determined that the Plant's capacity will be needed to assure system reliability for the next several years, especially in light of ongoing reliability concerns for several of LIPA's interties with neighboring utilities. The facility was repaired and returned to service in November 2021.
- Heat rate (i.e., fuel efficiency) and availability of the legacy National Grid-owned generation fleet that supplies power to LIPA under a cost pass-through arrangement continue to be better than the industry average for comparable technologies.
- Nine Mile Point Unit 2's equivalent availability during 2021 was 99.7%. Its capacity factor, based on its average annual Dependable Maximum Net Capability (DMNC) of 1,300 MW, was 98.0%. Exelon completed a refueling outage of the unit in March 2022.
- PSEG Energy Resources & Trade has met or exceeded all contractual performance targets in

2021, including Neptune and Cross Sound cable performance, generation bidding to the NYISO, load forecasting, fuel procurement, and scheduling, as well as settlements and invoicing.

- PSEG Energy Resources & Trade works with each of LIPA's power supply contract generators to schedule generation outages and testing activities with the goal of reducing overall power supply costs to LIPA's customers.

Competitive Procurement

“Minimizing cost by competitively procuring generation and distributed energy resources through wholesale market purchases, bilateral contracts, and if appropriate, after balancing cost and risk, ownership or pre-payments for energy, utilizing to the extent feasible and cost-effective, Authority-owned land and rights to acquire generating sites.”

- In 2020-21, PSEG Long Island initiated new procurement processes on LIPA's behalf for energy storage, solar power, and capacity imports, including:
 - Request For Proposal (“RFP”) issued April 2021 for up to 175 MW of energy storage projects, in compliance with the storage mandate in the CLCPA, with proposals received in July 2021 for sites offered by LIPA in addition to sites owned by developers or acquired from third parties;
 - Community Solar feed-in tariff for up to 20 MW of new renewable resources whose benefits will be directed toward low and moderate-income customers; and
 - 2021 Off Island Capacity RFP for purchase of up to 345 MW of capacity from generating facilities located in the ISO-New England control area for import over the Cross Sound Cable to help meet LIPA's capacity requirements for the period May 2023 through April 2024 and maintain valuable firm delivery rights into the Long Island load pocket, which would otherwise expire for lack of use under applicable NYISO rules.

Clean Energy

“Procuring cost-effective renewable resources, RECs, and behind-the-meter resources such as energy efficiency and demand response, including acting in coordination with other State energy authorities, if advantageous to our customers; integrating cost-effective distributed energy production and storage technologies; and enabling the economic and secure dispatch of resources deployed within the distribution system and on customer premises.”

- LIPA was undersupplied in Tier 1 RECs to meet its share of the State Clean Energy Standard for 2021. LIPA's REC requirement for 2021 equates to 2.04% of the total energy supplied, whereas LIPA's Tier 1-eligible (facilities that began operation since 2015) contracts supply about 1.4% of the load. For 2022, we also expect to be undersupplied with the requirement being 3.25%. Accordingly, LIPA has established a Clean Energy Compliance Fund to invest in future clean energy projects or REC purchases through NYSERDA, or LIPA procurements, in a manner consistent with the NYSERDA Alternative Compliance Payment fund, when such projects produce sufficient RECs.
- LIPA plans to meet a major portion of its future Tier 1 REC and OREC (offshore wind REC) targets by participating in NYSERDA's annual REC procurements. In April 2021, the Board

approved a long-term REC Purchase Agreement with NYSERDA that will be used to procure Tier 1 RECs and future ORECs.

- In 2021, residential and commercial energy efficiency programs resulted in 1.27 million MMBtu of energy savings (56.3 MW of incremental demand savings and 375,789 MWh), which is approximately 116% of the goal of 1.09 million MMBtu of energy savings.
- Long Island continues to have the most robust rooftop solar market in the State with nearly 64,000 photovoltaic systems installed. In 2021, customer-side installed capacity increased 61 MW (AC) with incremental annualized energy savings of 77,000 MWh.
- As of year-end 2021, there is also approximately 9.6 MW of behind-the-meter customer storage installed, virtually all in conjunction with photovoltaic installations.
- The Dynamic Load Management (“DLM”) program was deployed throughout the summer in 2021, in coincidence with both the New York State and Long Island peak days resulting in an estimated savings of \$200,000 as an offset against 2022 capacity costs. The commercial program was deployed eight times and the residential program was deployed seven times last summer.

Wholesale Market Policy

“Minimizing cost by representing the interests of Long Island electric customers in the New York and regional wholesale markets and their respective stakeholder processes, including direct engagement with Federal and State regulatory authorities.”

- LIPA has been engaged with the NYISO in assessing long-term market structure issues associated with CLCPA implementation, including renewable integration, transmission buildout, need for flexible generation capacity, reserve and regulation requirements.
- LIPA is working through the NYISO Stakeholder process on developing market rules for Energy Storage, Solar, and Offshore Wind resources. LIPA is engaged with stakeholders to revise market rules to more accurately recognize contributions of renewable energy resources and storage while eliminating existing rules that do not align with New York State Energy Policy goals.
- LIPA is engaged with the NYISO to evaluate new transmission facilities needed to integrate Offshore Wind. LIPA will have the opportunity to exercise its “Right of First Refusal” to construct necessary upgrades to existing LIPA-owned transmission facilities associated with the new bulk transmission facilities to be selected by NYISO.
- LIPA is coordinating with the DPS and other New York State Transmission Owners to develop a statewide least-cost plan for local transmission upgrades needed to integrate renewables in support of CLCPA goals.
- LIPA has completed revisions to expand the LI Choice program, so Long Island residents can purchase clean energy from qualified community aggregators as well as retail energy service companies (“ESCOs”).
- LIPA has worked with Neptune and outside counsel to challenge PJM’s cost allocation for new transmission facilities under the Regional Transmission Expansion Planning process. Working also with other merchant transmission providers, LIPA has achieved a settlement with the PJM Transmission Owners, dramatically reducing charges through 2028.

Annual Review of the Policy

The Board hired Leading Resources, Inc. to review the Board policies and facilitate discussion amongst the Trustees on amending certain policies. A working group of Trustees participated in various meetings to develop and draft amendments to the Policy. The draft amendments to the Policy have been shared with the entire Board.

The final version of the amended Policy, as drafted by the Trustees, is attached hereto as **Exhibit “B”**. The Policy has been renamed the Board Policy on Clean Energy and Power Supply.

Recommendation

Based upon the foregoing, I recommend approval of the above requested action by adoption of a resolution in the form attached hereto.

Attachments

Exhibit “A” Resolution

Exhibit “B” Board Policy on Clean Energy and Power Supply

RESOLUTION APPROVING THE REPORT TO THE BOARD OF TRUSTEES ON THE BOARD POLICY ON RESOURCE PLANNING AND CLEAN ENERGY

WHEREAS, the Resource Planning and Clean Energy Policy (the “Policy”) was originally approved by Resolution No. 1372, dated July 26, 2017; and

WHEREAS, the last annual report on the Policy was in June 2021, and the last amendments to the policy were made in July 2020; and

WHEREAS, the Board has conducted an annual review of the Policy and affirms that the Policy has been complied with and concurs that the changes proposed to the Policy and due and proper.

NOW, THEREFORE, BE IT RESOLVED, that consistent with the accompanying memorandum, the Board hereby finds that LIPA has complied with the Resource Planning and Clean Energy Policy for the period since the last annual review and approves the annual report to the Board; and

BE IT FURTHER RESOLVED, that the Board hereby approved the amendments to the Policy as set forth in **Exhibit “B”**.

Dated: May 18, 2022

Board Policy: **Clean Energy and Power Supply**

Policy Type: **Purpose**

Monitored by: **Oversight and Clean Energy Committee**

Board Resolution: **#1372, approved July 26, 2017**
#1421, amended July 25, 2018
#1487, amended July 24, 2019
 [#1551], amended July 22, 2020
 [#xxxx], amended May 18, 2022



LIPA’s vision for clean energy and power supply is to provide clean, reliable, resilient electricity to our customers at an affordable cost that both maintains the economic competitiveness of our region and minimizes the economy-wide greenhouse gas emissions of Long Island and the Rockaways by encouraging the electrification of vehicles, buildings, and equipment.

To achieve our vision for **Clean** energy, LIPA will:

- Achieve a **zero-carbon electric grid by 2040**, while meeting or exceeding LIPA’s share of the clean energy goals of New York’s Climate Leadership and Community Protection Act (“CLCPA”), including those for renewables, offshore wind, distributed solar, and storage.
- Demonstrate innovation and be recognized among the **leading utilities** in reducing economy-wide greenhouse gas emissions through **energy efficiency** and **beneficial electrification**.
- Improve equity for disadvantaged communities, as measured by meeting or exceeding LIPA’s share of New York’s **environmental justice** goals as defined by the CLCPA and the Climate Justice Working Group, including ensuring that disadvantaged communities receive 40% of the overall benefits of clean energy, energy efficiency, energy assistance, and energy transportation investments, but not less than 35% of the overall benefits of spending on clean energy and energy efficiency programs, projects or investments.

To achieve our vision for **Reliable Power Supply**, LIPA will:

- Plan for a power supply portfolio that meets or exceeds industry standards for reliability, as demonstrated through **Integrated Resource Plans** conducted no less than every five years and by implementing the actionable recommendations of those plans in a timely manner.

To achieve our vision for **Affordability**, LIPA will:

- Consider the benefits and costs of its clean energy programs and power supply to achieve the **greatest value** for our customers.
- Competitively procure the **least-cost resources and programs** that meet our clean energy and reliability objectives, including using our not-for-profit, tax-exempt cost of capital to finance assets or pre-pay for energy, and using LIPA-owned land or exercising LIPA’s rights

to acquire generating sites.

- Regularly demonstrate efforts to **minimize cost and maximize performance** with contractual counterparties and through **advocating with regulatory authorities** for fair cost allocations for Long Island and Rockaways electric customers.

The Chief Executive Officer, or his or her designee, will report annually to the Board on the key provisions of this Policy.