



Annual Report on Board Policy on Clean Energy and Power Supply

May 10, 2023

LIPA BOARD POLICY ON CLEAN ENERGY AND POWER SUPPLY

LIPA's policy 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.

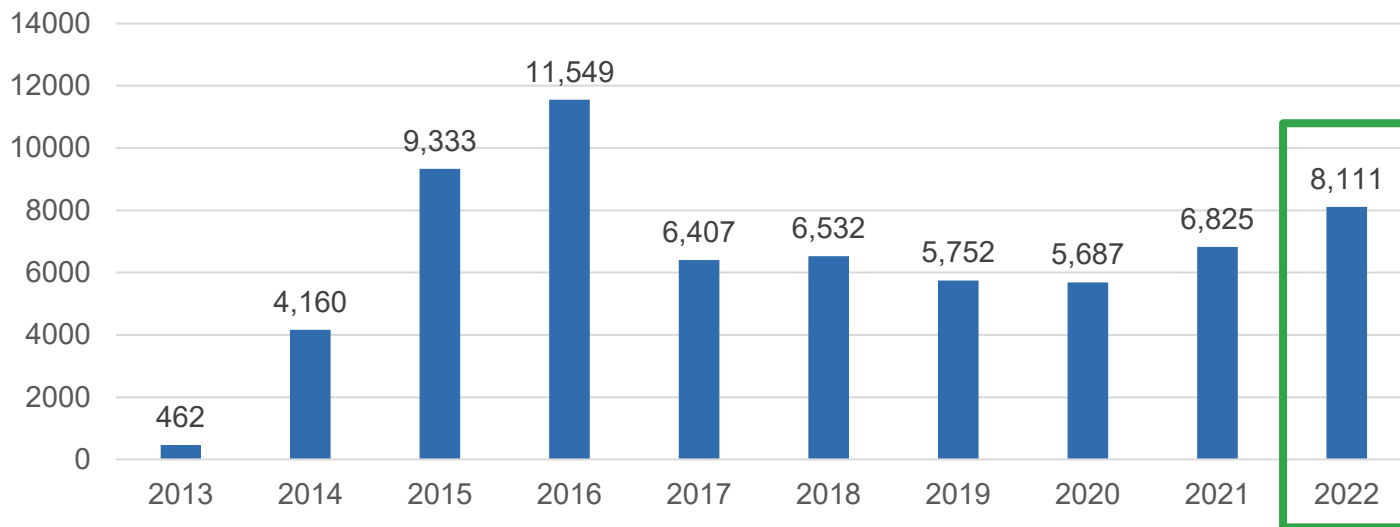
- **Clean Energy**
 - Zero-carbon electric grid by 2040
 - Meet or exceed LIPA's share of the clean energy goals of the CLCPA
 - Lead in energy efficiency and beneficial electrification
- **Power Supply Planning**
 - Conduct Integrated Resource Plans no less than every five years
 - Implement actionable recommendations of resource plans in a timely manner
- **Affordability**
 - Competitively procure the least-cost resources and programs that meet our clean energy and reliability objectives
 - Minimize cost and maximize performance with contractual counterparties
 - Advocate for fair rules and regulations
- **Environmental Justice and Disadvantaged Communities**
 - Ensure DACs receive 40% of CLCPA-driven benefits of clean energy, EE investments etc.

MEETING THE BOARD'S EXPECTATIONS FOR CLEAN ENERGY

- Achieve a zero-carbon electric grid by 2040, while meeting or exceeding LIPA's share of the clean energy goals of the CLCPA
 - 2,300 MW of offshore wind projects connecting to LI are under development
 - LIPA's energy storage RFP has resulted in selection of five projects amounting to 329 MW for contract negotiations
 - Long Island has over 900 MW of utility-scale, distributed, and rooftop solar projects, leading the state in solar deployment and already exceeding 2025 goals
 - LIPA is working with NYISO, developers and other stakeholders on transmission projects to integrate offshore wind and other clean energy resources
 - LIPA's proposal for a \$250 million federal grant for T&D investments supporting Distributed Energy Resources has received an initial favorable determination from USDOE
 - Existing clean energy commitments are sufficient to reduce LIPA's carbon emissions by 70% (from 2010 levels) by 2030

LOCAL SOLAR INSTALLATIONS ON THE RISE

New Solar Interconnection on Long Island and the Rockaways



Newsday

March 12, 2023

TOP STORIES

LI solar installations increase 19% in '22

- LIPA's long-standing support for the rooftop solar market has created the **most vibrant solar market** in New York, with approximately 40% of the State's rooftop solar
- In 2022, solar installations across Long Island **increased 19%** with **8,111 new installations** while there was a 16% decrease nationwide
- The new installations represent **79.3 MW of solar added to the grid** throughout LIPA's service territory
- LIPA is on track to exceed its share of the State's 10,000MW 2030 rooftop solar goal **at least three years early**

MEETING THE BOARD'S EXPECTATIONS FOR CLEAN ENERGY AND POWER SUPPLY PLANNING

- Plan for a reliable and clean power supply portfolio
 - PSEG LI has completed studies for LIPA's 2023 Integrated Resource Plan for Q2/Q3 release
 - Existing Long Island capacity and currently planned additions will meet LIPA's minimum Locational Capacity Requirement ("LCR") through at least 2030
 - All third-party-owned generation under contract with LIPA has met or exceeded contract targets
- Demonstrate innovation and leadership in reducing economy-wide GHG emissions through energy efficiency and beneficial electrification
 - LIPA's residential and commercial energy efficiency programs have exceeded the goal of 1.15 million MMBtu of energy savings
 - With over 20,000 heat pump installations on Long Island, LIPA has reached two-thirds of its goal of 30,000 heat pumps by 2025
 - LIPA has funded an \$88 million plan to build out the infrastructure to support more than 4,700 chargers across LI by 2025

2023 INTEGRATED RESOURCE PLAN (IRP)

- IRP focuses on:
 - Reliable, CLCPA compliant, cost-effective options for meeting future demand
 - System changes needed by 2030 with the focus on retirement of existing generation
- Anticipated release of findings to the public in Q2/Q3 2023
- Additional follow-up studies planned for 2023 and 2024
 - Update Long Island generation resource adequacy analysis, reflecting any system and reliability criteria changes
 - Review storage needs and identify preferred LI points of interconnection
 - Complete Climate Vulnerability Study and Resilience Plan

INTERCONNECTION INITIATIVES TO SUPPORT RELIABILITY

- Y-49 cable life extension and modernization
 - NYPA currently reconductoring the Long Island land-based portion of the Y49 cable
 - Expected in-service date of June 2023
- Restoring the Neptune cable import capability
 - Cable was de-rated to 375 MW for a portion of 2022, due to a transformer failure at Newbridge SS
 - New transformer was installed last fall, returning the line to its full 660 MW capacity for 2023
- 345/138kV, 450 MVA transformer spares for Y49, Y50, and Neptune Interties
 - In 2020, we experienced 2 separate failures of this class transformer (Newbridge & Shore Road)
 - LIPA acquired a new spare in July 2022
 - NYPA recently procured an additional spare
- Long Island Public Policy Transmission Project
 - In August 2021, NYISO issued RFP to increase LI export capability and ensure the full output of 3,000 MW of offshore wind is deliverable to the rest of the State
 - 7 projects shortlisted; award expected in 2nd half of 2023

MEETING THE BOARD'S EXPECTATIONS FOR AFFORDABILITY

- Consider the benefits and costs of its clean energy programs and power supply to achieve the greatest value for customers
- Competitively procure the least-cost resources and programs, including using our not-for-profit cost of capital and using LIPA-owned land and generation sites
 - In Sept. 2022, LIPA selected 329 MW of energy storage proposals for competitive contract negotiations. All are structured as build-own-operate-transfer contracts to take advantage of LIPA's access to tax-free debt to lower financing costs.
 - LIPA plans to meet a major portion of its future CLCPA renewable and storage needs by participating in statewide competitive programs administered by NYSERDA
 - LIPA continues to advance an electricity pre-payment to save customers money using our tax-exempt cost of capital.

MEETING THE BOARD'S EXPECTATIONS FOR AFFORDABILITY

- Regularly demonstrate efforts to minimize cost and maximize performance with contractual counterparties and through advocating with regulatory authorities for fair cost allocations
 - LIPA successfully challenged PJM's cost allocation of costs for allocating the costs of transmission system upgrades to LIPA's wheeling service charges saving customers \$64 million through 2028
 - LIPA and Con Ed successfully petitioned the PSC to reduce the cost allocation for offshore wind transmission to downstate utilities from over 75% to their load share ratio (13% for LIPA) and more equitably share the costs statewide
 - LIPA, along with other stakeholders, submitted comments to the PSC opposing a \$1 billion Con Edison proposal to allocate costs statewide for a Brooklyn transmission hub initially needed to support reliable service to Con Edison's own customers

MEETING THE BOARD'S EXPECTATIONS FOR EQUITY

- Improve equity for disadvantaged communities, by meeting or exceeding LIPA's share of New York's environmental justice goals for the energy sector
 - DACs to receive up to 40% of the overall benefits of clean energy, energy efficiency, energy assistance, and energy transportation investments under the CLCPA
 - LIPA's Community Solar feed-in tariff will provide up to 20 MW of new renewable resources whose benefits will be directed toward low and moderate-income customers
 - LIPA is funding 50 scholarships over the next 5 years for students from underserved communities seeking careers in the electric utility industry
 - New York Clean Transportation Prize, with \$10 million funding from LIPA, made awards in Nov. 2022, including a micro-shuttle in two LI disadvantaged communities (Brentwood and Rockaways)
 - LIPA's 2023 budget funds \$4 million for the LI Regional Clean Energy Hub, a partnership with NYSERDA and Cornell to assist communities in adopting clean energy and EE
 - LIPA's \$30,000 grant to the Shinnecock Nation assists income-eligible residents in applying for discounts on electric service and rebates for EE and heat pumps
 - LIPA is participating in the statewide process to define disadvantaged communities and meet its share of CLCPA goals

PROGRESS TO DATE ON LIPA'S CLEAN ENERGY GOALS

UPDATE ON LIPA'S CLEAN ENERGY GOALS



906 MW of 1310 MW (DC)
of solar by **2030**



20,080 of 30,000
of heat pumps by **2025**



33,174 of 180,000
light-duty EVs by **2025**



198.5 MW of 750 MW
of battery storage by **2030**



212 MW of 1,125 MW of
offshore wind by **2030**



3.5 TBtu of 7.9 TBtu of
energy efficiency by **2025**

* Includes 175 MW of pending utility-scale battery contract awards

Discussion

Questions?



FOR CONSIDERATION

May 10, 2023

TO: The Board of Trustees

FROM: Thomas Falcone

SUBJECT: Consideration of Approval of the Annual Report on the Board Policy Clean Energy and Power Supply

Requested Action

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

Background

The Board originally adopted the Policy in June 2017. The last annual report and amendments to the Policy was in May 2022. The Policy sets LIPA’s vision for clean energy and power supply “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.” 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. The Policy provides:

“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.”
 - As of year-end 2022, LIPA has made significant progress toward meeting the State’s goals. Through direct procurements and purchases of renewable energy credits, LIPA is on target to meet or exceed its share of statewide goals for renewables, offshore wind, distributed solar, and storage.
 - With regard to offshore wind, the CLCPA aims to achieve 9,000 MW by 2035, of which at least 3,000 MW is expected to be interconnected to Long Island. Currently, three projects totaling 2,300 MW are under development. LIPA is supporting the interconnection plans for all three projects. The 130 MW South Fork Wind project is

under construction and is expected to be in service late in 2023. The South Fork project is the State's first offshore wind project and it was proposed as part of a portfolio of solutions to the growing energy needs of the South Fork. LIPA has a contract to purchase the full output of the project, including its offshore wind renewable energy credits (ORECs). LIPA also intends to purchase ORECs from NYSERDA associated with other offshore wind projects, such that LIPA will satisfy its pro rata share of the State's 2035 goal.

- The CLCPA seeks to achieve 10,000 MW (dc) of distributed solar by 2030. LIPA has already achieved its share of the State's 2025 goal, with over 900 MW of utility-scale, distributed, and rooftop solar projects in service, and is on track to exceed the 2030 goal at least three years early. Long Island continues to have the most robust rooftop solar market in the State (accounting for approximately 40% of the statewide solar market as compared to 13% of the state's load) with nearly 72,000 photovoltaic systems installed. In 2022, customer-side installed capacity increased 79 MW (AC) with incremental annualized energy savings of 100,000 MWh. This was a 19% increase over 2021, while nationwide solar installations decreased 16%.
 - In April 2021, PSEG Long Island issued a Request for Proposals ("RFP") for at least 175 MW of energy storage projects to be in service by 2025. In September 2022, LIPA selected 329 MW of energy storage for competitive contract negotiations, which remain in progress. Additional procurements (directly by LIPA and/or through NYSERDA) are anticipated to meet LIPA's share of the State's 2030 goal of 6,000 MW. As of year-end 2022, there is also approximately 15.7 MW of behind-the-meter customer storage installed, virtually all in conjunction with photovoltaic installations.
 - LIPA is engaged with the New York Independent System Operator ("NYISO") and other utilities to review NYISO's evaluation of proposals for the Long Island Offshore Wind Export Public Policy Transmission Project, with the goal of maximizing benefits and minimizing costs. The project's goal is to reinforce the LIPA system and develop new interconnections to Con Edison's system, enabling at least 3,000 MW of offshore wind to be connected to Long Island and exported to the rest of New York State.
 - LIPA continues to coordinate with the Department of Public Service ("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 submitted to the Department of Energy ("DOE") a proposal seeking a federal grant for \$250 million towards \$500 million of T&D investments to enhance interconnection capacity for Distributed Energy Resources. LIPA was notified on February 24 of an initial determination of support by DOE and invited to submit a full grant application in May 2023.
 - All the above initiatives are expected to reduce LIPA's carbon footprint by 70%+ of 2010 levels by 2030.
 - LIPA's Integrated Resource Plan, to be completed in 2023, will lay out additional actions for CLCPA compliance, particularly through 2030.
- "Demonstrate innovation and be recognized among the leading utilities in reducing economy-wide greenhouse gas emissions through energy efficiency and beneficial electrification."
 - In 2022, LIPA's residential and commercial energy efficiency programs resulted in 1.22 million MMBtu of energy savings (29.8 MW of incremental demand savings and

- 328,701 MWh), which is approximately 106% of the goal of 1.15 million MMBtu of energy savings for the year.
- In 2022, PSEG Long Island deployed over 7,000 heat pumps across all customers under the home comfort heat pump incentive program. As of December 2022, there were over 20,000 heat pump installations on Long Island, two-thirds of LIPA’s goal of 30,000 heat pumps by 2025.
 - LIPA has funded an \$88 million plan to build out the infrastructure to support more than 4,700 chargers across Long Island and the Rockaways by 2025.
- 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.”
 - In 2020, LIPA offered a 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. As of 2022, PPA’s have been executed for 3.0 MW with awards made to three other projects for 11.0 MW. Accordingly, eligible customers are now being identified as beneficiaries of this clean energy to help meet the goals for disadvantaged communities.
 - In 2022, LIPA launched a new community college scholarship program to fund 50 scholarships over the next 5 years for students seeking education and training in careers related to the electric utility industry. The LIPA Scholarship will provide full tuition, fees, and books to students with the goal of attracting local talent from specified underserved communities on Long Island and the Rockaways.
 - In 2022, LIPA committed to fund a New York Clean Transportation Prize Award of up to \$10 million for innovative projects that expand access to clean, electric transportation and lower vehicle emissions in historically disadvantaged communities. Awards were announced in November 2022, including a project to provide micro-shuttle service in two communities on Long Island (Rockaways and Brentwood) led by Circuit Transit Inc.
 - In 2022, LIPA funded a \$30,000 grant to the Shinnecock Nation to assist income-eligible residents in learning about and applying for LIPA’s low and moderate-income assistance programs. Customers receive discounts on electric service and enhanced rebates for energy efficiency and clean technologies (e.g. heat pumps).
 - LIPA’s 2023 Budget funds a \$4 million Long Island Regional Clean Energy Hub, which is to be established and run in partnership with NYSERDA and Cornell Cooperative Extension over the next four years, so as to partner with community-based organizations in providing outreach and education services in clean energy and energy efficiency, and integrating those with social services, housing, economic development, health, and training, particularly in disadvantaged or underserved communities.
 - LIPA is participating in the statewide process to define disadvantaged communities and meet its share of CLCPA goals. As part of the 2023 OSA performance metric, there is an analytics project focused on creation of a LIPA dashboard to measure performance against the disadvantage communities goal. Reporting begins September

1, 2023.

“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.”
 - During 2022, PSEG Long Island completed studies to inform LIPA’s 2023 Integrated Resource Plan (“IRP”). LIPA expects to release the IRP findings to the public in Q2 or Q3 2023. Additional studies are being performed in 2023 to examine local capacity needs following planned generation retirements.
 - Existing Long Island capacity and currently planned additions are expected to meet the NYISO’s minimum Locational Capacity Requirement (“LCR”) through at least 2030. The current 2023 LCR of 105.2% 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 the existing fossil-fuel generation will be phased-out in a manner that continues to satisfy the LCR and system reliability.
 - In recent years, all third-party-owned generation under contract with LIPA met or exceeded contract targets.
 - LIPA continues to work cooperatively with intertie owners to ensure continued reliable service for power imports. The New York Power Authority expects to complete extensive replacement of the Long Island land-based portion of the Y-49 cable in June 2023, which should ensure the cable will provide reliable service for many years to come. In 2022, LIPA completed the replacement of a high voltage transformer at the Newbridge Substation to restore the Neptune cable to its full design output. LIPA continues to work with Con Edison to monitor ongoing issues with the Westchester County land-based segments of the aging Y50 cable, and Con Ed is taking appropriate actions to address reliability concerns.

“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.”
 - In September 2022, LIPA selected 329 MW of energy storage proposals for competitive contract negotiations. Consistent with LIPA’s objective to repurpose fossil sites for clean energy, two of the projects are located at existing fossil generation sites that host generating units scheduled for future retirement. All the contracts are structured as build-own-operate-transfer (“BOOT”) arrangements, which achieves two important objectives for the procurement: 1) to protect LIPA from startup and

- operational risks in the first seven years of the projects' lives and 2) to take advantage of LIPA's access to tax-free debt to finance the asset acquisition at the end of the BOOT term, thereby lowering financing costs to customers.
- LIPA plans to meet a major portion of its future CLCPA-driven Tier 1 Renewable Energy Credits ("REC") and OREC ("Offshore Wind REC") targets by participating in the statewide program administered by NYSERDA, which acts as the central procurement administrator for contracting with eligible generators through annual competitive solicitations. In April 2021, the Board approved a long-term REC Purchase Agreement with NYSERDA for a fixed quantity of RECs. In 2022, NYSERDA implemented a streamlined approach to collecting funding from all load-serving entities statewide based on the quantity of RECs available to be sold and the LSE's proportionate load share.
 - LIPA continues to advance an electricity pre-payment to save customers money using our tax-exempt cost of capital.
 - In November 2022, NYSERDA submitted a proposal to the Public Service Commission for centralized statewide procurement of "indexed energy storage credits," similar to the approach used for RECs and ORECs, to achieve the CLCPA targets for energy storage. LIPA will work with NYSERDA and other stakeholders on implementation details.
- "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."
 - LIPA worked with Neptune Cable to challenge the PJM regional transmission organization's allocation of costs for new transmission facilities within its system to exports of capacity, such as LIPA's use of the Neptune cable. Working also with other merchant transmission providers, LIPA has achieved a settlement with the PJM Transmission Owners, saving customers approximately \$64 million through 2028.
 - In 2022, LIPA and Con Edison successfully petitioned the PSC to reduce the cost allocation for offshore wind transmission for downstate utilities from over 75% to their load ratio share, which is approximately 13% for LIPA. LIPA is now engaged with the NYISO and other utilities to review NYISO's evaluation of proposals for the Long Island Offshore Wind Export Public Policy Transmission Project, with the goal of maximizing benefits and minimizing costs, while preserving LIPA's right to construct certain upgrades to the LIPA system that may be needed to complete the project.
 - LIPA, along with other stakeholders, submitted comments to the PSC opposing a Con Edison proposal to construct a \$1 billion transmission hub in Brooklyn to facilitate the connection of offshore wind projects and to allocate its cost statewide. The PSC determined that the proposed facility was needed initially to support reliable service to Con Edison's own customers and that the benefit for offshore wind connections had not been sufficiently demonstrated, rejecting for the time being any charges to other utilities, including LIPA's customers.

Annual Review of the Policy

LIPA Staff has reviewed the Policy and recommends no changes at this time.

Recommendation

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

Attachments

Exhibit "A" Resolution

RESOLUTION APPROVING THE REPORT TO THE BOARD OF TRUSTEES ON THE BOARD POLICY ON CLEAN ENERGY AND POWER SUPPLY

WHEREAS, the Clean Energy and Power Supply Policy (the “Policy”) was originally approved in July 2017; and

WHEREAS, The last annual report and amendments to the Policy was in May 2022; and

WHEREAS, the Board has conducted an annual review of the Policy and affirms that the Policy has been complied with.

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

Dated: May 10, 2023