



Annual Report on Board Policy on Clean Energy and Power Supply

Prepared for LIPA Board of Trustees

December 18, 2024



Discussion Topics

 Clean Energy

 Power Supply Planning

 Affordability

 Equity

LIPA Board Policy on Clean Energy and Power Supply

- 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 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

- The 132 MW South Fork Wind Project went into commercial operation in July 2024 under contract to LIPA
- The 924 MW Sunrise Wind Project has commenced construction, with LIPA supporting interconnection to transmission
- LIPA is completing offtake contracts with three bulk energy storage systems totaling 179 MW at locations in Shoreham, Islip, and Babylon
- The Propel NY Energy transmission project has commenced development aiming to integrate up to 3,000 MW of offshore wind interconnecting on Long Island
- LIPA support for Propel includes coordination and planning on project permitting and construction, and completion of certain network upgrades to the LIPA system

Long Island Has the Most Vibrant Solar Market in the State

- LIPA's long-standing support for behind the meter solar has helped make Long Island the leading region in New York, with approximately 39% of the State's rooftop solar
- In 2023, customers' total installed solar capacity increased by 85 MW
- 2023 solar installations increased by 29% over 2022
- LIPA is on track to exceed its share of the State's 10,000 MW 2030 rooftop solar goal 3 years early

Meeting the Board's Expectations for **Power Supply Planning**

Plan for a reliable and clean power supply portfolio

- In November 2023, LIPA released its 2023 Integrated Resource Plan
- The IRP demonstrates that LIPA is well positioned to meet reliability requirements through 2030
- As new clean resources – including large-scale offshore wind projects, the Propel NY Energy transmission project (which will support up to 3,000 MW of offshore wind), and utility-scale energy storage – reach commercial operation, Long Island can begin phasing out fossil generators

Meeting the Board's Expectations for **Power Supply Planning**

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 consistently met or exceeded CLCPA-related goals
- In 2023, PSEG Long Island deployed over 9,900 heat pumps under the home comfort heat pump incentive program, and the program is on track to exceed that amount in 2024
- LIPA has already exceeded its goal of 30,000 heat pumps by 2025. Noting that New York state has emphasized a 2030 target focused on dwellings, which is a shift from the historical focus on heat pump installations, LIPA has been monitoring our achievements based on dwellings since 2023 installing heat pumps in over 10,470 dwellings
- LIPA is planning to spend \$230 million under a multi-year plan to build the infrastructure to support more than 14,000 chargers across Long Island

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

- LIPA's 2020 RFP for energy storage is concluding successfully with potentially three offtake contracts for 179 MW of cost-competitive utility-scale projects
- LIPA and NYSERDA are discussing arrangements for LIPA to pay its fair share of the cost of NYSERDA's clean energy procurement programs to meet statewide clean energy goals
 - Renewable energy credits ("RECs") from solar and wind farms
 - Offshore wind RECs ("ORECs")
 - "Indexed storage credits" from energy storage resources
- LIPA executed a 100 MW electricity "pre-pay" transaction in October 2024. This transaction is projected to reduce LIPA's power supply costs by approximately \$4.5 million annually. Further transactions are under active consideration.

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

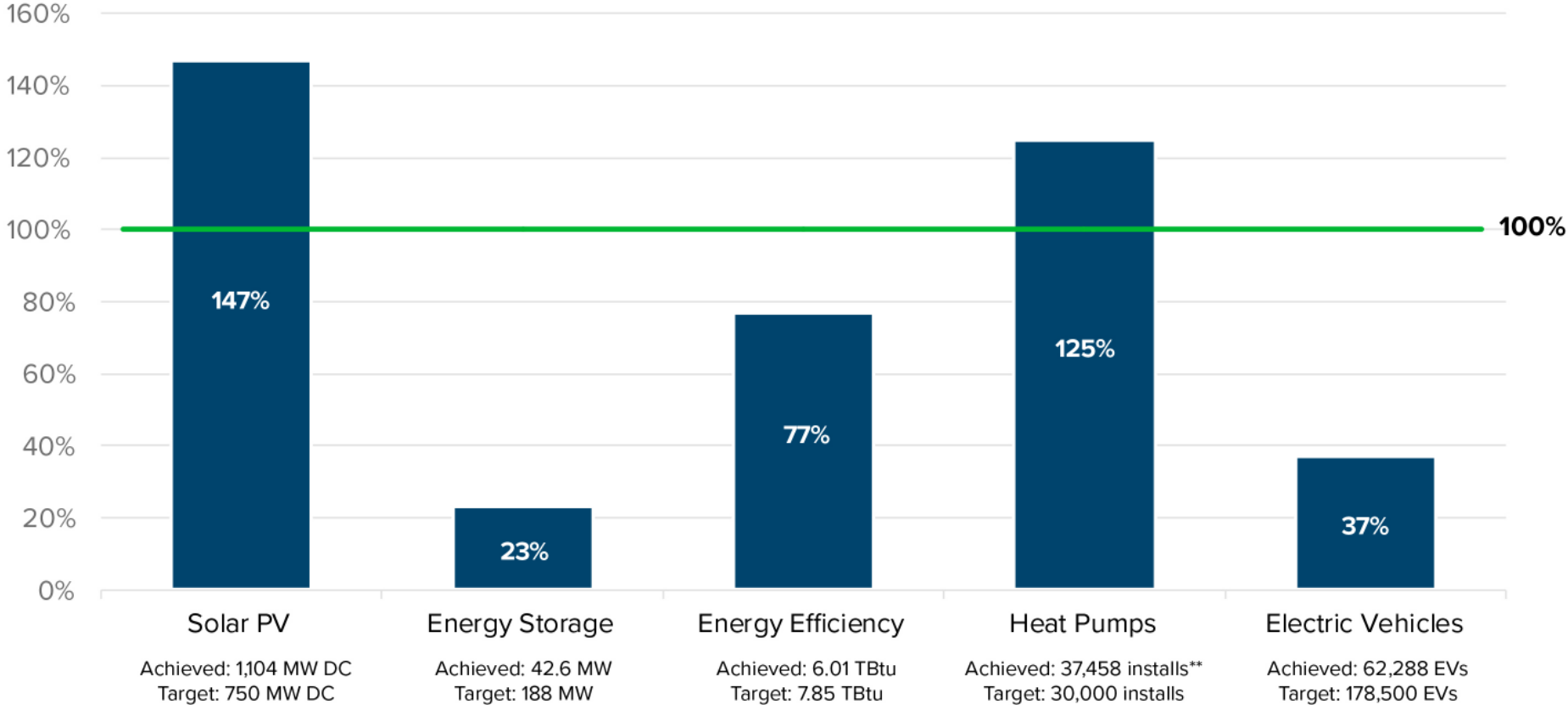
- LIPA successfully challenged PJM's transmission cost allocation for capacity exports over the Neptune cable, resulting in significant savings for LIPA customers
- LIPA's advocacy has helped ensure fair cost allocation for CLCPA-related transmission upgrades
 - \$3.2B Propel NY Energy transmission project
 - Cost overruns for Western NY Public Policy Transmission Project
- LIPA continues to push for efficient market price signals during the transition to clean energy
 - Variable costs used for offshore wind dispatch offers
 - Storage proxy used for capacity market price-setting

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

- Circuit Transit Inc. launched an electric micro-shuttle service in the Rockaways and Brentwood with a \$7 million of grant funding from LIPA.
- LIPA has committed \$2 million to help establish a Long Island-based Regional Clean Energy Hub partnership with NYSERDA and Cornell Cooperative Extension to work with community-based organizations on local initiatives for clean energy and energy efficiency.
- LIPA has 2024 OSA metrics that include a minimum of 35% spend on Disadvantaged Communities for its energy efficiency and beneficial electrification metrics
- LIPA has developed a tool to verify DAC spending on Clean Energy programs from 2020-2023. Based on current formulations in the Draft Guidance Document, LIPA exceeded the minimum DAC spending for 2023, and while the year is still underway, LIPA expects to exceed the minimum DAC spend in 2024. LIPA is awaiting approval of the Draft Guidance to provide verified numbers on DAC spending to NYSERDA as part of the statewide CLCPA DAC reporting process.

Progress to Date on LIPA's Clean Energy Goals*



* As of Q3 2024
 ** This target refers to individual heat pump installations and may include heat pumps used for other purposes. LIPA has since recalibrated its focus to whole-home heat pump installations to align with the state's goals for electrified or electrification-ready homes by 2030.

Actual % Target %



Questions?



FOR CONSIDERATION

December 18, 2024

TO: The Board of Trustees

FROM: John Rhodes

SUBJECT: Consideration of Approval of the Annual Report on the Board Policy on 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 were adopted in May 2023. 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 recommend 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.

“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.”
 - Through direct contracting for clean energy resources and purchases of renewable energy credits, LIPA has made significant progress toward meeting the State’s 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. New York’s first commercial-scale offshore wind farm, the 132 MW South Fork Wind Project, went into commercial operation in July 2024 under contract to LIPA. The project provides enough power to meet the needs of 70,000 homes on Long Island. Two other

projects, the 924 MW Sunrise Wind and the 810 MW Empire Wind I, are currently in development under contracts with NYSERDA. LIPA is supporting Sunrise Wind's connection to LIPA's grid network, whereas Empire Wind 1 will connect to the Con Edison system. LIPA participates in cost sharing for the NYSERDA contracted projects on the same pro-rata basis as the other load serving entities in New York and expects to receive credit for its energy purchases from South Fork against its proportionate obligation for the statewide program.

- The CLCPA seeks to achieve 10,000 MW (dc) of distributed solar by 2030. LIPA has already substantially exceeded its share of the State's 2025 goal, with over 1,100 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 39% of the statewide solar market as compared to 13% of the state's load) with over 90,000 photovoltaic systems installed. In 2023, customer-side installed capacity increased 85 MW (AC) with incremental annualized energy savings of about 100,000 MWh. This was a 29% increase in 2023 over 2022, while nationwide solar installations decreased by 19%.
 - LIPA is currently wrapping up contract negotiations to purchase dispatch rights from three Li-ion bulk energy storage systems totaling 179 MW at locations in Shoreham, Islip, and Babylon. These projects will position LIPA as a statewide leader in utility-scale storage and should meet most of LIPA's proportionate share of the State's storage goals in the pre-2030 timeframe.
 - As of mid-year 2024, there is also approximately 23 MW of behind-the-meter customer storage installed, virtually all in conjunction with photovoltaic installations. LIPA continues to work with NYSERDA, DPS and other stakeholders to facilitate new distributed storage projects on Long Island. In this regard, LIPA and NYSERDA are finalizing an MOU committing LIPA to fund its proportionate share of NYSERDA's retail and residential energy storage procurement program for 2024-26.
 - LIPA is working with the New York Independent System Operator and Propel NY Energy to develop a transmission project to bolster parts of the grid network on Long Island, in New York City and across Westchester County to support the integration and export of at least 3,000 MW from offshore wind projects interconnecting on Long Island. LIPA's role includes coordination and planning on project permitting and construction for Long Island-based facilities, and completion of certain network upgrades to the LIPA system. Construction is expected to commence in 2026.
- "Demonstrate innovation and be recognized among the leading utilities in reducing economy-wide greenhouse gas emissions through energy efficiency and beneficial electrification."
 - As of October 2024, LIPA's residential and commercial energy efficiency programs resulted in 646,286 MMBtu of energy savings, which is approximately 82% of the goal of 791,725 MMBtu of energy savings for the year.
 - As of Q3 2024, LIPA deployed whole house heat pumps in over 10,470 dwellings across all customer sectors. As was the case in 2023, total heat pumps counts are based on housing units served by whole house heat pumps, as this approach is consistent with the Governor's 2 Million Heat Pump ready initiative. Long Island's share of the statewide goal is 67,769 dwellings with whole house heat pumps by 2030.

- LIPA has an estimated \$230 million plan to build the infrastructure for more than 14,435 chargers across Long Island and the Rockaways by 2031 to support nearly 290,000 expected electric vehicles in the region.
- “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 2024, five PPA’s have been executed for 12.0 MW with three projects totaling 7 MW currently in construction. 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.
 - Circuit Transit Inc., a recipient of the 2022 New York Clean Transportation Prize winner in the Electric Mobility Challenge category, is now operating a micro-shuttle service for the Rockaways and Brentwood. The service was made possible by LIPA’s award of \$7 million for innovative projects that expand access to clean, electric transportation and lower vehicle emissions in historically disadvantaged communities. Circuit has provided Rockaways residents with over 5,000 rides since December 2023 and launched its newest service in Brentwood in September 2024.
 - 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 2024 Budget funds \$2 million for a Long Island Regional Clean Energy Hub, which is managed by NYSERDA and Cornell Cooperative Extension. The Hub’s mission is to partner with community-based organizations in providing outreach and education services in clean energy and energy efficiency, and integrate those with social services, housing, economic development, health, and training, particularly in disadvantaged or underserved communities.
 - LIPA has been participating in the statewide process to define disadvantaged communities and meet its share of CLCPA goals. As part of the 2024 OSA performance metric, LIPA has been tracking and verifying the performance against the disadvantaged communities goal and has developed internal tracking tools to facilitate this effort.
 - Based on current formulations in the Draft Guidance Document, LIPA exceeded the minimum DAC spending for 2023, and while the year is still underway, LIPA expects to exceed the minimum DAC spend in 2024. LIPA is awaiting approval of the Draft

Guidance to provide verified numbers on DAC spending to NYSERDA as part of the statewide CLCPA DAC reporting process.

“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.”
 - In November 2023, LIPA released its 2023 Integrated Resource Plan (“IRP”). The release of the IRP was accompanied by briefings for the LIPA Board, state officials and other stakeholders, press releases, a Newsday editorial by LIPA’s CEO, a webpage with links to a Summary Guide, FAQs and informative videos, targeted emails and three public comment sessions on Long Island.
 - Following the publication of the IRP, PSEG Long Island completed follow-on studies to examine local capacity needs under various generation retirement scenarios, among other studies. PSEG Long Island plans to update the IRP base case in 2025 for internal use.
 - 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 LCR of 107.3% of peak load is satisfied mainly with fossil-fueled generation and a smaller contribution from renewable resources. As the new Propel NY Energy transmission project together with offshore wind and energy storage resources begin to reach commercial operation, Long Island will be in position to phase out a portion of the existing fossil-fuel generation 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 transmission service for power imports. In 2023, the New York Power Authority completed extensive replacement of the Long Island land-based portion of the Y-49 cable, to help ensure the cable will provide reliable service for many years to come.
 - LIPA is participating with the state’s other transmission owners in the NYISO Coordinated Grid Planning Process to better integrate the studies performed at the local level with the NYISO’s bulk power system planning and generation interconnection processes, improve the integration of local T&D and bulk system studies with NYSERDA’s renewable generation and storage procurements, and improve forecasting of renewable generation development for specific locations on the local T&D and bulk transmission grid.

“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.”

- LIPA's pending contracts for bulk energy storage were procured through a competitive RFP. Consistent with LIPA's objective to repurpose fossil sites for clean energy, two of the projects are located next to existing fossil generating units destined for future retirement. The contracts are structured as build-own-operate-optional-transfer (“BOOOT”) arrangements, which achieves two important objectives: 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-exempt debt to finance the asset acquisition at the end of the BOOOT term, thereby lowering total costs to customers.
 - LIPA continues to work with NYSERDA and the Department of Public Service to develop the implementation plan for New York's 6 GW Energy Storage Roadmap. NYSERDA anticipates conducting annual procurements for “indexed energy storage credits,” similar to the approach used for RECs and ORECs, to achieve the CLCPA targets for energy storage. LIPA and NYSERDA have exchanged ideas on a crediting mechanism for LIPA-procured storage against LIPA's proportionate cost responsibility for the statewide program.
 - 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. As of year-end 2024, LIPA and NYSERDA are in discussions to complete a Tier 1 REC purchase agreement for LIPA's proportionate share of the statewide program.
 - LIPA executed a 100 MW electricity “pre-pay” transaction in October 2024. This transaction is projected to reduce LIPA's power supply costs by approximately \$4.5 million annually. Further transactions are under active consideration.
- “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 customers that use the facilities to export capacity, such as LIPA's use of the Neptune cable. Along with other merchant transmission providers, LIPA is working to achieve a settlement with the PJM Transmission Owners that, if approved by FERC, is likely to result in significant saving for customers.
 - In 2022, LIPA and Con Edison successfully petitioned the PSC to more appropriately allocate the cost of certain offshore wind transmission facilities to reflect LIPA's overall load ratio share (which is approximately 13%).
 - LIPA successfully advocated for the LI Export Public Policy Transmission Need (“PPTN”) Propel NY Energy project, which offered the best combination of low cost and high export/import and interconnection flexibility out of many contending project proposals. LIPA expects the project will deliver significant net benefits to ratepayers over its lifetime.

- In 2023, LIPA and PSEG ER&T successfully worked with NYISO to set Off-Shore Wind (“OSW”) reference offer prices at OSW’s marginal variable costs. NYISO had originally proposed to set reference prices at the all-in contract cost for the South Fork project, preventing the economic dispatch of wind in nearly all hours. By allowing a realistic reference price and dispatch pattern, LIPA customers are estimated to save about \$240 M in marginal fuel cost savings over a 10-year period.
- In 2024, LIPA worked with the other New York Transmission Owners and DPS to reclassify about \$60 M in Western NY PPTN cost overruns as “foreseeable”, thus subject to a reduced return on equity. LI customers will save about \$3 M over a 10-year period.
- In 2024, LIPA worked with the state’s other transmission owners and load interests to advocate for a 2-hour battery storage proxy as part of NYISO quadrennial demand curve reset process. The demand curve is an important determinant of the market cost of generating capacity to load serving entities like LIPA. Once ratified by FERC and the courts, this change is estimated to save New York consumers \$1.6 B annually compared to using a conventional fossil proxy. Although LIPA is currently largely hedged against capacity market price increases, over the longer-term LIPA expects the change will benefit its customers significantly.

Enterprise Risk Management Discussion

The Board has adopted a Policy on Enterprise Risk Management (“ERM”). Enterprise risks are brought to the Board’s attention throughout the year. There is one major risk related to the Policy that is representative of both LIPA and PSEG Long Island. The risk is *Suboptimal planning and/or CLCPA execution of the overall strategy including projects and other activities to achieve LIPA’s portion of the New York State climate goals could result in insufficient resource allocations, reduced system reliability, increased customer costs, and negative public perception.*

The CLCPA project execution risk is highly rated and among the top risks reported to the F&A Committee. This risk is being mitigated by evaluating changes in projects, load forecasts, markets, and by modifying resource plans accordingly to ensure reliability and minimize customer bill impact. We are also active participants with NPCC, NYSRC, NYISO and NYS DPS through various technical committees to ensure appropriate assumptions and studies are conducted to maintain system reliability. There is proactive communication with various stakeholders through the Project Council and TDPC to discuss major transmission project drivers such as PPTN, East End retirements, grid planning and incorporate feedback into study assumptions and recommendations. As a result of the mitigation actions in place and underway, we believe this risk is being effectively managed.

Annual Review of the Policy

LIPA Staff has reviewed the Policy and recommend 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 2023; and

WHEREAS, the Oversight and Clean Energy Committee (the “Committee”) of the Board of Trustees has conducted the annual review of the Policy and has recommended 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 Policy for the period since the last annual review and approves the annual report to the Board.

Dated: December 18, 2024