LONG ISLAND POWER AUTHORITY

MINUTES OF THE OVERSIGHT and CLEAN ENERGY COMMITTEE MEETING

HELD ON DECEMBER 18, 2024

The Oversight and Clean Energy Committee of the Long Island Power Authority ("LIPA") was convened at 9:32 a.m. at LIPA's Headquarters, Uniondale, NY, pursuant to legal notice given on December 13, 2024, and electronic notice posted on the LIPA's website.

The following LIPA Trustees were present in person:

Dominick Macchia, Committee Chair David Manning, Committee Member Valerie Anderson Campbell Drew Biondo

Representing LIPA, in person, were John Rhodes, Acting Chief Executive Officer; Bobbi O'Connor, General Counsel and Board Secretary; Brian Rudowski, Acting Chief Information Officer; Gary Stephenson, Senior Vice President of Power Supply, Jen Hayen, Director of Communications; and Bill Robins, Senior Digital Specialist. Participating via video conferencing was Jason Horowitz, Assistant General Counsel and Assistant Secretary to the Board.

Representing the Department of Public Service were Carrie Meek Gallagher, Director; and Nick Forst, Deputy Director.

Chair Macchia welcomed everyone to the Oversight and Clean Energy Committee meeting of the Long Island Power Authority Board of Trustees.

Chair Macchia stated that the first item on the agenda is the adoption of the minutes from the June 26, 2024 Committee meeting.

Upon motion duly made and seconded, the minutes of the June 26, 2024 meeting were approved unanimously.

Chair Macchia stated that the next item on the agenda is the Consideration of

Recommendation to Approve a Memorandum of Understanding with NYSERDA for Retail

Storage to be presented by Gary Stephenson.

Mr. Stephenson presented the following action item and took questions from the

Trustees:

Requested Action

The Oversight and Clean Energy Committee (the "Committee") of the Board of Trustees (the "Board") of the Long Island Power Authority ("LIPA") is requested to recommend that the Board authorize the Acting Chief Executive Officer or his designee to execute a memorandum of understanding ("MOU") with the New York State Energy Research and Development Authority ("NYSERDA") to fund LIPA's share of the State's Residential and Retail Energy Storage Procurement Program.

Background

New York State, through the Climate Leadership and Community Protection Act of 2019 and further executive action by the Governor, has established a goal of 6 GW of energy storage by 2030. In March 2024, NYSERDA and the Department of Public Service Staff filed "New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage" ("Roadmap"), which proposes a set of energy storage programs across the residential, retail, and electric utility sectors to meet the statewide energy storage goal. In June 2024, the Public Service Commission issued an order adopting many of the Roadmap recommendations, including a Residential and Retail Energy Storage Procurement Program ("Program") to be administered by NYSERDA with a budget of \$814,600,000 for the purposes of procuring 200 MW of residential battery energy storage and 1,500 MW of retail energy storage by 2030, with "retail storage" defined as systems ranging in size up to 5 MW of installed storage capacity.

NYSERDA is to implement the Program with the regulated utilities and through the voluntary participation by LIPA. These participants are each expected to provide a portion of the funding for NYSERDA's expenditures based on their proportionate share of the 2023 annual electric load delivered by all participating distribution companies, which in LIPA's case amounts to 13.23%. The proposed MOU between NYSERDA and LIPA commits LIPA to pay its share of Program expenditures amounting to \$4.1 million for the first three years of the Roadmap implementation period, 2024-26.

Discussion

Energy storage helps integrate clean energy onto the grid, increases system efficiency, and increases reliability where energy storage is used in place of traditional T&D investments. Customer-owned energy storage can be used to keep critical systems online during outages, especially in the face of increasingly inclement weather events. The

flexibility that energy storage offers is key to enabling the electric system to adapt to increasing load, respond to peak events, and shift load from on-peak to off-peak hours to relieve high loads on the network and reduce the cost of energy.

LIPA has offered rebate incentives for customer-owned storage since 2018. As of March 2024, 31 MW of behind-the-meter energy storage has been installed in LIPA's service territory comprising 20 MW of residential storage and 11 MW of retail storage. Included in the retail amount are two grid-connected 5 MW storage systems in Montauk and East Hampton, which were procured outside of the retail incentive program and are controlled by LIPA under long-term contracts.

The existing funding for LIPA's ongoing Residential Energy Storage Incentive Program is expected to be fully allocated by Q2 2025 at the current rate of customer enrollment. PSEG Long Island, under its "Utility 2.0" 5-year plan, has proposed an additional \$1.5 million of funding for residential storage incentives for 2025 and 2026, enough to incentivize an estimated 555 systems.

NYSERDA stopped offering Long Island retail storage incentives when the prior funding ran out, and there are no retail storage incentives proposed in LIPA's 2024 Utility 2.0 plan. However, PSEG Long Island and LIPA are launching a new initiative to evaluate potential enhancements to the commercial framework for Long Island-based retail storage projects, including the "value stack" compensation mechanism available to certain distributed energy resources, which may complement a new and enhanced retail storage incentive program by improving the overall economics for front-of-meter retail storage. The effort is intended to produce a plan for a renewed Long Island retail storage incentive program to be rolled out as part of the upcoming 2025 Utility 2.0 5-year plan, if warranted.

By increasing the budget for the Long Island residential and retail storage incentive programs from the current \$1.5 million to \$4.1 million over the next three years, LIPA is reinforcing its already strong commitment to the statewide clean energy transition. PSEG Long Island and LIPA will continue to coordinate with NYSERDA, DPS and other stakeholders on program design and implementation as part of the 2025 Utility 2.0 planning process.

Recommendation

Based on the foregoing, I recommend that the Trustees authorize the Acting Chief Executive Officer or his designee to take all actions, including, without limitation, executing the MOU with NYSERDA as described above.

A motion was made and seconded, and the Trustees unanimously adopted the following

resolution:

RECOMMENDING THE AUTHORIZATION TO EXECUTE A MEMORANDUM OF AGREEMENT ("MOA") WITH NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY ("NYSERDA") FOR FUNDING FOR THE CLEAN ENERGY HUB PROGRAM WHEREAS, LIPA and NYSERDA are in the process of negotiating the MOU relating to funding for NYSERDA's Residential and Retail Energy Storage Procurement Program; and

WHEREAS, the total cost of the contribution by LIPA is calculated to be up to \$4.1 million over three years.

NOW, THEREFORE, BE IT RESOLVED, that the Oversight and Clean Energy Committee hereby recommends that the Board authorize the Acting Chief Executive Officer or his designee to execute and effect an MOU with NYSERDA consistent with the terms of the accompanying memorandum, and to perform such other acts and deeds as may be necessary, convenient or appropriate, in the judgment of the Acting Chief Executive Officer or his designee, to implement LIPA's participation in the Program.

Chair Macchia stated that the next item on the agenda is the Consideration of

Recommendation to Approve the Annual Review of the Board Policy on Clean Energy and

Power Supply to be presented by Gary Stephenson.

Mr. Stephenson presented the following action item and took questions from the

Trustees:

Requested Action

The Oversight and Clean Energy Committee (the "Committee") of the Board of Trustees (the "Board") of the Long Island Power Authority ("LIPA") is requested to adopt a resolution recommending approval of 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 <u>Exhibit "A."</u>

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, customerside 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 economywide 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 microshuttle 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 TDPCC 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.

A motion was made and seconded, and the Trustees unanimously adopted the following

resolution:

RESOLUTION RECOMMENDING APPROVAL 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 Oversight and Clean Energy Committee hereby recommends that the Board find that LIPA has complied with the Policy for the period since the last annual review and recommends approval of the annual report to the Board.

Chair Macchia stated that the next item on the agenda is the Consideration of

Recommendation to Approve the Annual Review of the Board Policy on Information

Technology and Cyber Security to be presented by Brian Rudowski.

Mr. Rudowski presented the following action item and took questions from the Trustees:

Requested Action

The Oversight and Clean Energy Committee (the "Committee") of the Board of Trustees (the "Board") of the Long Island Power Authority ("LIPA") is requested to adopt a resolution recommending that the Board: (i) approve the annual report on the Board Policy on Information Technology and Cyber Security (the "Policy") for the period since the last annual review; and (ii) find that LIPA has substantially complied with the Policy, which resolution is attached hereto as <u>Exhibit "A."</u>

Discussion

In December 2019, the Board adopted the Information and Physical Security Policy. The Policy delineated the Board's expectations and direction for information and physical security in accordance with public safety, operational, reputational, and compliance requirements. It established a reporting requirement to the Board on compliance with the key provisions of the Policy. In 2021, the prior policy was supplanted by the Information Technology and Cybersecurity Policy. The Policy provides that LIPA's "vision for information technology and cyber security is to use technology to enhance and simplify the customer experience, improve reliability, and minimize operating costs while ensuring robust, secure technology platforms that provide operational stability and protect customer, employee, and third-party data from unauthorized access or disruption. LIPA supports data privacy by transparently communicating how customer information is collected, used, and disclosed." The Board completed the last annual review of the Policy in December 2022.

Compliance with the Policy

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

Compliance with each element of the Policy is discussed in detail below.

1. "Invest in information technology that supports the efficiency of business operations, promotes innovation, and provides long-term customer value."

- LIPA funded a substantial portfolio of IT projects in 2024, which advances the goals of increasing efficiency, promoting innovation, and providing long-term customer value. The portfolio covers a range of projects, including enhancements to existing systems and implementation of new technologies, with the larger projects covered by the 2024 IT metrics. Some noteworthy IT projects are discussed below.
 - <u>Contact Center as a Service</u>: In 2022, PSEG Long Island began the Contact Center as a Service project to provide a fully integrated cloud-based contact center solution, allowing for numerous customer-facing improvements, including a seamless omni-channel customer experience, improved response time on resolutions, enhanced reporting, and many other enhancements. The project went live in November 2023.
 - System Separation: In the amended OSA between LIPA and PSEG Long Island, 0 effective April 1, 2022, the parties agreed that it would be beneficial for all IT Systems serving LIPA to be separate and distinct from the systems, data, reports, and information of PSEG Long Island and its affiliates. In 2022, as required by the OSA, a joint LIPA and PSEG Long Island IT Team developed an IT System Separation Plan ("the Plan") to separate all PSEG Long Island IT Systems serving LIPA from PSEG New Jersev systems. The Plan, which has been adopted by the Board, organizes the systems to be separated into four logical groupings ("bundles") for phased implementation. Work began with the issuance of an RFP for the first bundle in the last quarter of 2022 and the discovery and documentation of the remaining bundles/applications in 2023. The project has experienced significant schedule delays, and the 2024 IT-07 System Separation metric will not be met. All systems are targeted to be separated by the end of 2025, in accordance with the OSA, and LIPA will continue to engage in oversight actively.
 - <u>Standardized Data Access Platform (SDAP)</u>: The SDAP project was initiated to implement the Board recommendation to improve LIPA and Department of Public Service ("DPS") access to PSEG Long Island financial and operational data through a Standardized Data Access Platform comprised of an enterprise-wide data warehouse, a broader data lake, and tools to support reporting and analytics. A reduced-scope Phase I deployment was delivered in 2022. As part of Phase II SDAP, LIPA and PSEG Long Island developed a two-year roadmap identifying some of the systems, such as CCaaS, AMI, CAS, GRIDX, Procurement Ariba, SAP HR, etc., for which the data will be ingested into the data lake as per LIPA's business requirements. The data for the remaining systems will be identified and delivered in future phases.
 - <u>CRM Replacement</u>: PSEG Long Island has been maintaining the Salesforce CRM platform at a significant cost; however, the capabilities that were being leveraged were redundant with those provided by other tools. At LIPA's request, PSEG Long Island initiated a project to identify and implement alternate methods of managing these functions. In 2023 and 2024, Customer Operations functions were implemented allowing for significant cost savings in Customer Operations license and maintenance fees and improving the overall Call Center agent and customer experience.
 - <u>Governance, Risk, and Compliance (GRC) Tool Deployment</u>: This project will select and implement a GRC tool to manage and automate GRC-related data and processes for the critical areas of Cyber Security, Business Continuity, and

Disaster Recovery. The tool will provide efficiencies through automation, support regulatory compliance, and enable the organization to mature risk management capabilities through data and process enhancements. The project was initiated in response to the 2023 NIST Cybersecurity Framework (CSF) assessment recommendation. Phase 0 will be completed in 2024, and it will provide vendor selection and a project plan for implementation in 2025.

- LIPA has also established annually recurring IT System Resiliency metrics (IT-03 and IT- 10), which aim to minimize the probability and impact of system failures through well-designed, robust, and thoroughly exercised Disaster Recovery Plans (DRPs) and Business Continuity Plans (BCPs) for critical systems and processes. The metric was not met in 2022 and 2023. Given the importance of making progress towards the objective of developing a resiliency program that ensures that PSEG Long Island can continue to perform its essential functions and deliver core capabilities during and following disruptions to normal operations, LIPA engaged a third-party consultant in 2024 to conduct a holistic assessment of the resiliency program and develop recommendations on the path forward, including action plans with prioritized and achievable improvements. The assessment report was provided to PSEG Long Island in September 2024. PSEG Long Island will complete the actions identified in the report for 2024 and will submit a PIP in the 1 Otr. of 2025 to outline the plan to complete the report's recommendations. The metric will be carried forward in 2025 to review the progress on the gap closure and ensure that the critical systems are exercised according to a structured plan.
- 2. "Deploy modern grid management technology and data analytics that enhance grid operations, customer service, utility asset management, and demand management, as measured by a Smart Grid Maturity Model level consistent with industry best practices (i.e., top 25% of utilities.)."
 - The Smart Grid Maturity Model (SGMM) is a business tool stewarded by the Software Engineering Institute at Carnegie Mellon University. The model provides a framework for understanding the current extent of smart grid deployment and capability within an electric utility, a context for establishing strategic objectives and implementation plans supporting grid modernization, and a means to evaluate progress over time toward those objectives.

In 2022, LIPA engaged a consultant to conduct an SGMM Assessment. The preliminary assessment recommended numerous areas for technology investment, such as Advanced Metering Infrastructure (AMI), Distributed Energy Resources Management Systems (DERMS), and Advanced Distribution Management System (ADMS). Several initiatives have since been undertaken, including AMI, DERMS, and ADMS Roadmap. For instance:

<u>DERMS</u>: DERMS is a software platform used to manage a group of distributed energy resource (DER) assets—such as rooftop photovoltaic solar panels, behind-the-meter batteries, or a fleet of electric vehicles—to deliver grid services and balance demand with supply to help utilities achieve mission-critical outcomes. In 2023, PSEG Long Island went live with a DERMS Phase 1 deployment, providing Distribution Operators visibility to DER and allowing for greater integration of DER into the electric grid operations.

- In 2024, the operational technology focus has been on a number of critical Life Cycle Planning (LCP) projects to upgrade or replace technologies nearing end-oflife. These projects will increase capacity and enhance capabilities, supporting and enabling the planned future expansions of smart grid technologies. These projects are discussed further in Item #4.
- 3. "Ensure the capacity of the information technology organization to deliver reliable, robust, and resilient systems, as measured by a Capability Maturity Model Integration level of 3 or higher."
 - LIPA has established an Organizational Maturity metric to improve IT capability and performance and achieve Capability Maturity Model Integration (CMMI) Maturity Level 3. The 2024 metric requires a third-party consultant's benchmark appraisal of PSEG Long Island's CMMI maturity level. Due to resource conflicts with system separation, the appraisal targeted for Q4 2024 is now planned for Q1 2025.
 - LIPA established the Project Performance metrics (IT-05 and IT-06) to improve project performance across the portfolio. While overall performance continues to fall short of the expected standards, the performance metrics have enhanced LIPA's ability to identify and work with PSEG Long Island management to address weaknesses and gaps in PSEG Long Island's project performance.
- 4. "Regularly upgrade information and operational technology systems to maintain all systems within their active service life and under general support from the product vendor."
 - Metric IT-04, System and Software Lifecycle Management was established to ensure all IT and OT assets managed by PSEG Long Island on behalf of LIPA, including but not limited to computers, communications equipment, networking equipment, hardware, software, and storage systems, are within their active service life and under general support from the product vendor Pursuant to the metric, PSEG Long Island developed an Asset Inventory and a Two-Year Refresh Plan in 2022, which are now refreshed annually. The updated 2024-2025 Refresh Plan specifies a number of refresh projects to be conducted in 2024 to advance the objective of replacing or upgrading all end-of-life assets and was approved by LIPA. Execution of the plan is in progress.
 - In 2024, the Life Cycle Replacement projects include some critical upgrades of operational technology systems, including:
 - <u>EMS Upgrade</u>: This project was initiated in 2024 to upgrade the SCADA/EMS system, add a test/development environment at the Alternate Control Center (ACC), and develop a solution for compliance with the Ambient Adjusted Rating regulatory requirement (FERC 841 Order). The project is on track to deploy the upgraded EMS (Energy Management System) at the new Transmission Control Center (TCC) and the ACC in June 2025.
 - <u>Multiplexer Replacement</u>: This multi-year project is for the evaluation, design, and implementation of a new technology platform to replace the nearing end-oflife Multiplexer, which provides the network communication platform for critical T&D and NERC applications. A Systems Integrator (SI) was selected in 2023 and has been conducting an RFP process for the evaluation and selection of a new equipment vendor, as well as design activities to assess the structural work

required to accommodate the new equipment. The equipment vendor is expected to be selected in Q4 2024, with the implementation to continue through 2027.

- <u>CG Concentrator Project</u>: The data Concentrators are critical networking devices that manage the communications and controls of over 3,000 SCADA devices across the PSEG Long Island service territory. The existing Concentrators had limited expansion capability and had come to the end of life for continued product support. In 2023, the project's first phase was completed with the selection of new Concentrators that provide the capacity needed to sustain the SCADA device growth as more Smart connected devices are connected to the grid, with enhanced cybersecurity features. Installation and commissioning of the new Concentrators at all sites were planned to be completed in 2024 but will extend into 2025 as the vendor resolves issues at the Hewlett site.
- <u>DER to DSCADA Communications Upgrade</u>: This project upgrades the SCADA communications network from Distributed Energy Resources (DER) to the DSCADA/EMS systems and increases capacity, which is necessary to allow for new DER to be connected to the EMS and DSCADA systems at the currently projected growth rates. Deployment is planned to be completed in 2024.
- 5. "Conduct quarterly internal vulnerability assessments and annual third-party vulnerability assessments and penetration testing of all information and operational technology systems and promptly mitigate vulnerabilities"
 - <u>PSEG Long Island Cybersecurity</u>: Starting in late 2023, PSEG Long Island engaged an external vendor to conduct representative assessments of internal, external, D-SCADA, and mobile/web application attack surfaces. The results of these assessments were finalized in the summer of 2024. PSEG Long Island has reported that it has remediated all External surface vulnerabilities and the highest-severity Internal vulnerabilities. Remediation is ongoing for the remaining vulnerabilities. PSEG Long Island has planned to conduct a vulnerability assessment and penetration testing in 2025.
 - As per the DPS Management Audit recommendation, LIPA will also conduct an independent penetration testing and vulnerability assessment of the PSEG Long Island system in 2025.
 - The Northeast Power Coordinating Council (NPCC) audited PSEG Long Island's North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection (CIP) standards from April through August of 2024. PSEG Long Island's Cyber Security Risk and Compliance (CSRC) received a subset of five recommendations for the NERC CIP-008 standard covering Cyber Security Incident and Response Planning. PSEG Long Island is on track to complete the recommendations by 4 Qtr. 2024. PSEG Long Island has reported that they have a weekly vulnerability scanning program for all IT assets.
 - Ransomware can severely impact business processes and leave organizations without the data to operate or deliver mission-critical services. The organizations affected often experience reputational damage, significant remediation costs, and interruptions in their ability to provide core services. In 2024, LIPA established the Ransomware Readiness and Response metric (IT-09). The metric ensures that any suspected or confirmed ransomware incidents are responded to consistently, controlled, and effectively. An independent third-party consultant reviewed and assessed the adequacy of PSEG Long Island in responding to a ransomware incident.

The assessment report was provided to PSEG Long Island in June 2024. The report provided observations, identified gaps, assessment and made recommendations. The recommendations are organized into an actionable roadmap based on best practices for developing, implementing, and improving PSEGLI's ransomware readiness and response plans. PSEG Long Island is currently working to develop and submit a PIP for LIPA approval to fully implement the ransomware readiness and response roadmap, which aligns with the recommended timelines in the assessment report. In 2025, LIPA will engage the services of an independent consultant to review the gap closure artifacts/deliverables and gap closure activities and observe the ransomware response and recovery plan exercise as required by the 2025 (IT-09) performance metric.

- <u>LIPA Cybersecurity</u>: In 2023, LIPA completed all information technology systems' third-party vulnerability assessments and penetration testing. In the first quarter of 2024, LIPA remediated all the vulnerabilities identified and plans to do the same in the second quarter of 2025.
- LIPA's vulnerability management team meets bi-weekly and reviews vulnerabilities identified in systems managed by LIPA using a real-time vulnerability management/reporting tool. The team creates the remediation plan for newly identified vulnerabilities based on their criticality and reviews the remediation status of previously identified vulnerabilities. LIPA has also implemented tools to provide 24X7 monitoring and notification of any new vulnerabilities identified. The vulnerability reporting tool sends daily alerts to the Cybersecurity team.
- 6. "Maintain a level of 3 or higher on the NIST Cybersecurity Framework, as evaluated annually through an independent assessment."
 - LIPA and PSEG Long Island have adopted the NIST Cybersecurity Framework (CSF) to improve cybersecurity programs. The Framework uses business drivers to guide cybersecurity activities. It considers cybersecurity risks as part of the risk management processes, including guidance on People, Processes, and Technology to implement defense in depth for the enterprise.
 - LIPA established a cybersecurity default metric for PSEG Long Island under the reformed PSEG Long Island contract, effective April 1, 2022, to achieve and maintain NIST CSF Tier 3. The reformed contract gives LIPA the right to terminate the contract should PSEG Long Island fail to maintain compliance, providing a strong improvement incentive. LIPA has hired a third-party evaluator to independently review PSEG Long Island's cyber readiness relative to the metric. The assessment work was completed in the First quarter of 2023, and the Final Assessment and Recommendations report was provided to PSEG Long Island in May 2023. A review by an independent consultant has started in 3 Qtr. 2024 to determine the progress PSEG Long Island has made to remediate the findings of the 2023 report. The final assessment report will be available in Jan. 2025.
 - LIPA also established The Cyber Security Organization metric, which aims to advance the objective of building a cyber security organization under the PSEG Long Island CISO that is independent of PSEG New Jersey and fully capable of developing, managing, and supporting the cyber security program independent of Affiliate Services (as defined in the OSA). The Cyber Security Organization study report was provided to PSEG Long Island in October 2023. The study recommendations aligned with the planned Systems Separation and the NSIT CSF remediation project resource

requirements and addressed the evolving organizational needs. LIPA funded the positions identified in the new organizational design in the 2024 budget request. PSEG Long Island is expected to completely implement the organizational design and build the organization in 2024. The metric is currently on track, with 11 FTEs planned to be hired in 2024, with 4 FTEs remaining to be hired before the end of the year.

- An independent assessment of LIPA's cyber security posture using the NIST CSF Framework was completed in Q4 of 2023. In 1 Qtr. 2024, a work plan was developed to manage and track the implementation of the report's recommendations. LIPA is currently implementing the report's recommendations and documenting its processes. LIPA has completed approximately 55% of the work identified in the work plan and will continue implementing tools and capabilities as part of the program's maturing.
- 7. "Communicate how customer information is collected, used, and disclosed and ensure that, if confidential customer information is shared with a third party for a business purpose, the third party has robust information security practices."
 - PSEG Long Island collects customers' information to provide electric service. The policy posted on the LIPA website describes what personal information is collected, when it is collected, how it is used, how it is protected, and under what circumstances that information may be shared with a third party. The policy has also been posted on the PSEG Long Island website.

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 are several risks related to the policy for both LIPA and PSEG Long Island. For LIPA, these risks include a cyber event resulting from unauthorized access to LIPA-managed systems that results in material financial losses, impact on LIPA's day-to-day operations, or the organization's reputation. Additionally, there is a risk related to PSEG Long Island's system separation from PSEG Newark. This risk is "system separation and/or transition is not fully completed by the PSEG LI 2025 contract expiration and results in increased costs, system disruption, and/or negative reputation". For PSEG Long Island, these include a "cyberattack on the EMS/BCS systems that disables or allows someone to access control of the system operationally, resulting in the inability to operate the system effectively." Also, the breach of personally identifiable information (PII) could result in fraud, financial impact, and negative public perception.

The system separation project is behind schedule, and the related metric IT-07 will not be achieved in 2024. This project and its associated risks are being closely monitored and are expected to be completed by the contract expiration date of December 31, 2025.

Cybersecurity and PII for both LIPA and PSEG Long Island are rated as high-level risks. LIPA's Department of Innovation and Information Technology mitigates these risks with a comprehensive risk management strategy and concurrent oversight of PSEG Long Island's IT department. The strategy includes several of the mitigation actions noted in this Report, including the completion of the annual penetration testing with remediation plans developed for vulnerabilities identified, the adoption of the NIST cybersecurity framework with a goal of maintaining a level 3 or higher assessment, and the adoption of a Cyber Security Default Metric.

In light of the extensive efforts detailed in this Policy of both LIPA's Department of Innovation and Information Technology and PSEG Long Island's IT department, we believe the cyber and PII risks are being adequately managed.

Annual Review of the Policy

LIPA Staff has reviewed the Policy and recommends no change 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.

A motion was made and seconded, and the Trustees unanimously adopted the following

resolution:

RESOLUTION RECOMMENDING APPROVAL OF THE ANNUAL REPORT TO THE BOARD OF TRUSTEES ON THE BOARD POLICY ON INFORMATION TECHNOLOGY AND CYBER SECURITY

WHEREAS, the Board Policy on Information Technology and Cyber Security (the "Policy") was approved by the Board of Trustees in November 2021; 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 substantially complied with.

NOW, THEREFORE, BE IT RESOLVED, that consistent with the accompanying memorandum, the Committee hereby recommends that the Board of Trustees find that LIPA has substantially complied with the Policy and approve the annual report to the Board.

At approximately 10:12 a.m. Chair Macchia stated that the Committee would adjourn to

Executive Session to discuss public safety matters. Chair Macchia stated that no votes would be

taken and that the Committee would not be returning to public session.
