Biennial Report for the Years Ended December 31, 2022 and December 31, 2023

Long Island Power Authority

Project No. 173961

8/30/2024

Biennial Report for the Years Ended December 31, 2022 and December 31, 2023

prepared for

Long Island Power Authority
Uniondale, New York

Project No. 173961

8/30/2024

prepared by

Burns & McDonnell EGS, P.C.
Kansas City, Missouri

August 30, 2024

John Rhodes
Acting Chief Executive Officer
Long Island Power Authority
333 Earle Ovington Boulevard, Suite 403
Uniondale, New York 11553

Re: Long Island Power Authority
Biennial Report for the Years Ended December 31, 2022 and December 31, 2023
Project Number 173961

Dear Mr. Rhodes:

In compliance with the requirements pursuant to the role of Consulting Engineer and Rate Consultant stated in Section 702(b) of the General Bond Resolution (General Resolution) and Section 7.02 of the General Subordinated Resolution (Subordinated Resolution and together with the General Resolution, the Resolutions), Burns & McDonnell EGS, P.C. (Burns & McDonnell) submits this Long Island Power Authority Biennial Report for the two years ended December 31, 2023 (the Report). This Report summarizes our review and assessment of the Long Island Power Authority (LIPA or the Authority) electric system. This Report documents the examination of the electric system, the system organization and management, and an assessment of the utility's financial condition. Financial, statistical, and operating data utilized in preparing the Report were provided by the Authority.

In preparing the Report, Burns & McDonnell reviewed documents pertaining to the generation system and completed assessments of the Authority's transmission and distribution system. The assessments involved interviews, observations, and a review of annual expenditures from 2022 through 2023 and the 2024 budget. Burns & McDonnell also reviewed the adequacy of the revenues provided by current retail rates in relation to the requirements of the Resolutions.

Based on its reviews and assessments, it is the opinion of Burns & McDonnell that the electric system is being operated and maintained in a manner that is consistent with current electric utility practices. In addition, the current retail rates have provided sufficient revenues to satisfy the debt service coverage requirement in the Resolutions. Further, it is the opinion of Burns & McDonnell that the balances in the various reserve funds maintained by the Authority are sufficient for their intended purposes.

We appreciate the opportunity to work with the Authority and the cooperation and assistance provided by staff in preparing this Report. We will be happy to discuss the Report with you at your convenience.

Sincerely,
Burns & McDonnell EGS, P.C.

Michael E. Borgstadt, PE
Director

CEB/bsa

TABLE OF CONTENTS

Page No.

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
ADR	Annual Disclosure Report of the Long Island Power Authority (Fiscal Year 2023)
CAIDI	Customer Average Interruption Duration Index
CEO	Chief Executive Officer
CLCPA	Climate Leadership & Community Protection Act
CL&P	Connecticut Light & Power
Constellation	Constellation Energy Generation, LLC
COPS	Constant Oil Preservation System
CSC	Shoreham to East Shore - Cross Sound Cable
CSC Agreement	Cross Sound Cable Firm Transmission Capacity Purchase Agreement
DOE	US Department of Energy
DPS	NYS Department of Public Service
EIA	US Energy Information Administration
ELI	Efficiency Long Island
ERP	Enterprise Resource Planning
Exelon	Exelon Corporation
Forecast Period	The two years ending December 31, 2025
GCB	Gas circuit breaker
GENCO	National Grid Generation LLC
GWh	Gigawatt Hour
IRP	Integrated Resource Plan
kV	Kilovolt
LILCO	Long Island Lighting Company, a wholly owned subsidiary of the Authority, which does business under the name LIPA
LIPA/LILCO Merger	LIPA's acquisition of LILCO
MSA	Amended & Restated Management Services Agreement
MW	Megawatt
Neptune Cable	Sayreville to Levittown Cable
NGRID	National Grid

Abbreviation	Term/Phrase/Name
NMP	Nine Mile Point
NMP1	Nine Mile Point Generating Station Unit 1
NMP2	Nine Mile Point Generating Station Unit 2
NNC	Northport to Norwalk Harbor Cable
Northport	Northport Electric Generating Station
NRC	Nuclear Regulatory Commission
NYPA	New York Power Authority
OMS	Outage Management System
OSA	Amended & Restated Operations Services Agreement
PACB	Public Authority Control Board
PILOT	Payment in Lieu of Taxes
PJM	Pennsylvania-New Jersey-Maryland Region
PSC	NYS Public Service Commission
PSEG	Public Service Enterprise Group
PSEG ER&T	PSEG Energy Resources & Trade LLC
PSEG-LI	PSEG Long Island, a PSEG subsidiary dedicated to Long Island operations
Report	Long Island Power Authority Biennial Report for Two Years Ending December 31, 2023
REV	Reforming the Energy Vision
RFP	Request for Proposal
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index for Long Interruptions
Second A&R OSA	Second Amended and Restated Operations Service Agreement
Service Area	Nassau & Suffolk Counties and the Rockaway Peninsula of Queens County
Study	Study to prepare the Biennial Report for the Years Ended December 31, 2022 and December 31, 2023
Study Period	The two years ended December 31, 2023
T&D System	Transmission & Distribution System
TCC	Transmission Control Center
The Act	Long Island Power Authority Act

Abbreviation	Term/Phrase/Name
The Authority (or LIPA)	Long Island Power Authority
The Resolutions	Subordinated Resolution, and together with the General Resolution
TOD	Time-of-Day
Trap bags	Temporary sand barriers
UDSA	Utility Debt Securitization Authority
Y-49	East Garden City to Sprain Brook Interconnection
Y-50	Dunwoodie to Shore Road Cable

STATEMENT OF LIMITATIONS

In preparation of the Long Island Power Authority Electric System Biennial Report for the two years ended December 31, 2023, Burns & McDonnell EGS, P.C (Burns & McDonnell) relied upon information provided by the Authority, and its service provider, PSEG Long Island (PSEG-LI), during the reporting period. The information included various analyses, computer-generated information and reports, audited financial statements, and other financial and statistical information, as well as other documents such as operating budgets and current retail electric rate schedules. While Burns & McDonnell has no reason to believe that the information provided, and upon which Burns & McDonnell has relied, is inaccurate or incomplete in any material respect, Burns & McDonnell has not independently verified such information and cannot guarantee its accuracy or completeness.

Estimates and projections prepared by Burns & McDonnell relating to performance and costs are based on Burns & McDonnell's experience, qualifications, and judgment as a professional consultant. Since Burns & McDonnell has no control over weather, cost and availability of labor, material and equipment, labor productivity, contractors' procedures and methods, unavoidable delays, economic conditions, government regulations and laws (including interpretation thereof), competitive bidding, and market conditions or other factors affecting such estimates or projections, Burns & McDonnell does not guarantee the accuracy of its estimates or predictions.

Burns & McDonnell is not acting as a "municipal advisor" for the Long Island Power Authority within the meaning of Section 15B of the Securities Exchange Act of 1934, as amended and does not owe a fiduciary duty to LIPA pursuant to the Securities Exchange Act with respect to the information and material contained in this Report and our communications.

1.0 EXECUTIVE SUMMARY

1.1 Introduction

Long Island Power Authority ("LIPA" or the "Authority") owns an electric transmission and distribution system ("T&D System") serving most of Nassau and Suffolk Counties and the Rockaway Peninsula of Queens County, including assets, facilities, equipment, and contractual arrangements used to provide the transmission and distribution of electrical capacity and energy to electric customers within the Service Area.

The Authority provides retail electric service to approximately 1.16 million customers. During 2023, the maximum annual peak demand for the Authority reached 4,820 megawatts ("MW"). Total system electric revenues were $3.70 billion in 2023.

Table 1-1 provides summary information on annual retail energy sales and total electric revenues during the 2019 through 2023 period.

Table 1-1: Historical Sales and Customers

	2019	2020	2021	2022	2023
Peak Demand (MW)	5,269	5,203	4,984	5,025	4,820
Energy (MWh)					
Residential	9,075,913	9,567,815	9,535,379	9,390,891	8,878,605
Commercial and Industrial	9,249,787	8,521,867	8,782,143	8,862,909	8,625,359
Other	474,911	490,796	480,874	488,702	503,188
Total Sales	18,800,611	18,580,478	18,798,396	18,742,502	18,007,152
Lost and Unaccounted For	1,303,461	1,242,886	1,152,946	1,141,551	1,116,864
Total Energy Requirements	20,104,072	19,823,364	19,951,342	19,884,053	19,124,016
System Load Factor (Percent)	41.9	43.4	45.7	45.2	45.3
Customer					
Residential	1,015,662	1,020,864	1,024,507	1,026,632	1,028,015
Commercial and Industrial	115,908	116,042	117,435	119,328	121,601
Other	5,618	5,734	5,620	5,622	5,627
Total Customers	1,137,189	1,142,640	1,147,562	1,151,583	1,155,243
Total Electric Revenues ($000)	3,516,355	3,900,721	3,930,788	4,279,158	3,698,833

1.2 Biennial Report

In compliance with the requirements pursuant to the role of Consulting Engineer and Rate Consultant within the provisions of the Section 702(b) of the General Bond Resolution and Section 7.02 of the General Subordinated Resolution (Subordinated Resolution, and together with the General Resolution, the

Resolutions)[1], the Authority retained Burns & McDonnell EGS, P.C. ("Burns & McDonnell") to conduct the efforts required to prepare this Biennial Report ("the Report") for the two years ended December 31, 2023 ("Study Period").

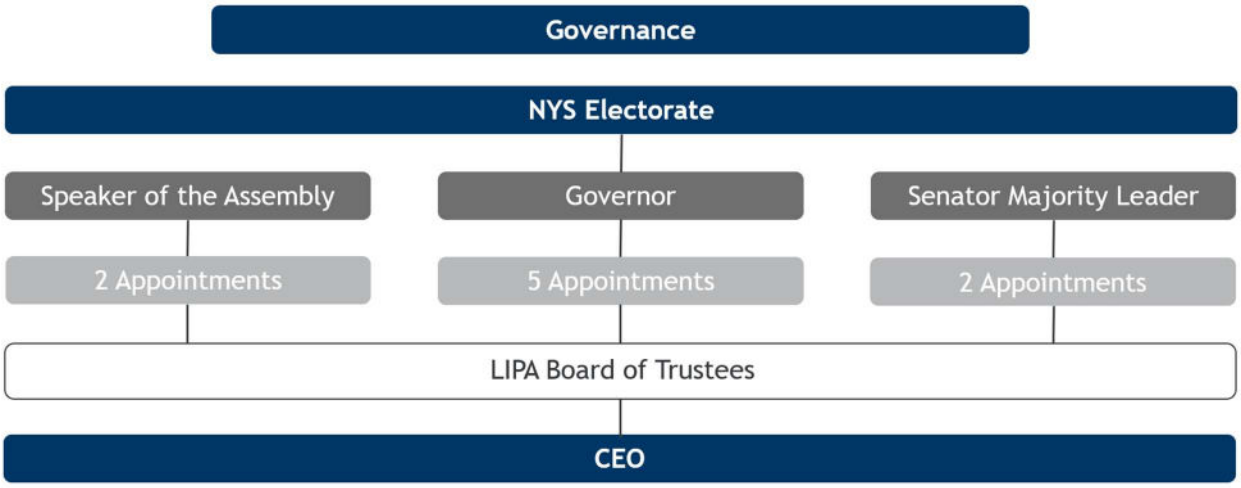
1.3 Organization and Management

1.3.1 Board of Trustees

During the period of this Report, the Authority was governed by a nine-member Board of Trustees whose members were required under the Long Island Power Authority Act ("the Act") to be residents of the Service Area. The Board of Trustees assumes many committee roles, including finance and audit; oversight and Clean Energy; governance; and planning, personnel and compensation committees. The CEO of the Authority reports directly to the Trustees. Figure 1-1 displays the organizational structure of the Board of Trustees and the Authority management during the Study Period.

Additional details pertaining to the Board of Trustees are provided in Section 3 of the Report.

Figure 1-1: Trustees Organization During Study Period[2]



[1] Capitalized terms in this Report, if not separately defined, refer to the capitalized terms of the Resolutions.
[2] On November 13, 2023, Governor Hochul appointed Tracey A. Edwards as Chair of the LIPA Board of Trustees.

1.3.2 LIPA Management

1.3.2.1 Acting Chief Executive Officer

John Rhodes was appointed Acting Chief Executive Officer of the Long Island Power Authority in March 2024. With extensive experience in clean energy, he has served as an advisor to President Biden and New York Governor Kathy Hochul.

Previously, John was Chief Program Officer at the New York Department of Public Service, overseeing clean energy programs. He also served as Special Assistant to the President for Climate Policy, advancing clean energy deployment.

1.4 Organizational Policies

1.4.1 LIPA Reform Act

The LIPA Reform Act in 2013 was enacted in response to concerns related to the organizational relationship between the Authority and its service provider. The LIPA Reform Act was intended to bring accountability and transparency to the delivery of electricity by:

1. Authorizing the reformulation of the relationship between LIPA and PSEG-LI, such that PSEG-LI assumed more responsibility related to operations in the Service Area; the Authority's role is to oversee the activities of PSEG-LI and to meet its obligations with respect to its bonds and notes and all applicable statutes and contracts.
2. Creating a new Long Island based office in the Department of Public Service ("DPS"), which is the staff arm of the New York Public Service Commission ("PSC") to assist with oversight of core utility operations of PSEG-LI.
3. Authorize the retirement of a portion of the Authority's or the Utility Debt Securitization Authority's ("UDSA") outstanding debt from the proceeds of UDSA bonds at lower interest rates than existing indebtedness and capping or eliminating certain categories of payments in lieu of taxes ("PILOTs"), with savings passed on to ratepayers.

1.4.2 Primary Operating Agreement

Through a competitive procurement process, effective January 1, 2014, a wholly-owned subsidiary of PSEG fully dedicated to the Authority's Long Island operations (PSEG-LI) began providing operations, maintenance, and related services for the T&D system under the Amended and Restated Operations Service Agreement ("OSA"). The OSA expires December 31, 2025. Additionally, it includes a provision

that if PSEG-LI achieves certain levels of performance during the first ten years, the parties will negotiate in good faith an eight-year extension on substantially similar terms and conditions. Beginning January 1, 2015, an affiliate of PSEG-LI, PSEG Energy Resources & Trade LLC ("PSEG ER&T"), assumed certain power supply management, fuel procurement and related services that were historically provided pursuant to separate agreements between the Authority and other service providers.

1.4.3 OSA Reforms

In August of 2020, Tropical Storm Isaias landed on Long Island and the Rockaways with rain and wind gusts up to 70 miles per hour. The resulting damage to the electric system caused approximately 646,000 customers outages with approximately $300 million in response and restoration costs. During the storm, the Outage Management System ("OMS") and telephone system failed, which are mission-critical information technologies used to restore power outages, assess damage, estimate customer restoration times, dispatch trucks, and communicate with customers. DPS conducted an investigation into the performance of PSEG-LI and concluded that PSEG-LI failed to properly anticipate and respond to the weather emergency in accordance with its approved Enterprise Resource Planning ("ERP"). This led to the creation of the Second Amended and Restated Operations Service Agreement ("Second A&R OSA"), effective as of April 2022. This reformed contract increases the amount of PSEG Long Island's annual compensation at risk from $10 million to $40 million; and subjects PSEG-LI to up to 110 detailed Performance Metrics set annually by the Board with a recommendation by the DPS to ensure PSEG-LI meets the Board's strategic direction for service to customers and industry best practices.

1.4.4 2024 OSA RFP

On May 29, 2024, LIPA launched a request for proposals ("RFP") to identify the future service provider to LIPA after the OSA expires on December 31, 2025 (the "2024 OSA RFP"). LIPA expects to complete the solicitation process in mid-2025, at which point the preparatory transition period to the new service provider is expected to commence and continue until the end of 2025.[3]

1.4.5 2024 PSMFM RFP

On May 30, 2024, LIPA launched an RFP to identify the future service provider to LIPA after its agreements for power supply management services and fuel management services with PSEG ER&T expire on December 31, 2025 (the "2024 PSMFM RFP"). The 2024 PSMFM RFP seeks a service

[3] Annual Disclosure Report of the Long Island Power Authority (Fiscal Year 2023) ("ADR"), page 6.

provider for a 5-year term to provide power supply management services and fuel management services similar to those currently being provided by PSEG ER&T with certain modifications.[4]

1.5 Electric System Assessment

1.5.1 Nine Mile Point 2 Generating Station

Nine Mile Point (NMP) Nuclear Power Station is located on the south shore of Lake Ontario in the Town of Scriba, New York. NMP has two separate nuclear power stations, designated as NMP1 and NMP2. LIPA holds 18 percent ownership in the NMP2. Constellation Energy Generation, LLC ("Constellation") owns 100 percent of NMP1 and 82 percent of NMP2. NMP2 consists of a boiling water reactor and General Electric turbine generator and operates under licensing from the Nuclear Regulatory Commission ("NRC"), set to expire in 2046.

LIPA has entered into an operating agreement with Constellation for NMP2. As part of the agreement, LIPA and Constellation each have one representative on a management committee, which meets to discuss plant matters. Constellation prepares final budgets and sends them to LIPA for annual approval. LIPA is responsible for its ownership portion of operating costs and capital investments associated with NMP2 each year.

1.5.2 Transmission System

LIPA's transmission system consists of overhead and underground facilities, vehicles, equipment, land parcels, easements, contractual arrangements, and other assets used to provide the transmission and distribution of electric capacity and energy to and within the Service Area. The T&D System includes seven transmission interconnections that link it to utilities outside the Service Area. With the exception of line Y-49, these transmission interconnections are either owned in part or under contract to LIPA.

1.6 Financial Assessment

1.6.1 Operating Results

Total system energy sales were 18,743 gigawatt-hours ("GWh") in 2022 and 18,007 GWh in 2023. During the period of this Report, total revenue from sales to electric customers was $4.28 billion for 2022 and $3.70 billion for 2023. The decrease in revenue was driven primarily by lower fuel costs and energy usage.

[4] ADR, page 6.

1.6.2 Adequacy of Electric Rates

To determine if LIPA has set rates to pay all of its operating costs as they come due, and to meet debt service and Rate Covenant requirements under the Resolutions, the Authority prepares a Rate Covenant Calculation. The Rate Covenant Calculation is reviewed by its independent accountants who in turn issues a report regarding the adequacy of LIPA's rates. The independent accountants' assessment for the years of this Report found that LIPA's rates and charges were set at a level sufficient to meet its Rate Covenant requirements.

1.6.3 Status of Revenue Bonds

At the end of 2023, the Authority had outstanding revenue bonds, general revenue notes, general commercial paper notes, and restructuring bonds issued by the Utility Debt Securitization Authority ("UDSA"). During 2022, debt decreased by $230 million compared to 2021. During 2023, debt increased by $322 million compared to 2022 resulting from the issuance of new general revenue bonds and general revenue commercial paper notes. As of December 31, 2023, LIPA had a total of $9.21 billion of outstanding debt from revenue bonds, revenue commercial paper, and UDSA bonds. The UDSA bonds are not issued pursuant to the Resolutions and are not obligations of the Authority, LIPA, PSEG-LI, or any of their affiliates.

1.7 Conclusions

Based on statements and information provided, as well as the observations and reviews performed, it is the opinion of Burns & McDonnell that:

1. The Authority and PSEG-LI have provided services adequate for operation, maintenance, and repair of the system during the Study Period, January 1, 2022 to December 31, 2023.

2. The Authority's electric transmission and distribution system and the associated facilities, including the Nine Mile Point 2 Generating Station, partially owned by the Authority, have been operated and maintained consistent with accepted industry practices in the United States over the last two years. The Authority is evaluating opportunities to improve its system in certain areas, such as the OMS.

3. For the Forecast Period, it is reasonable to expect the Authority and PSEG-LI (and the future service provider) will continue to provide services adequate for operation, maintenance, and repair of the system consistent with that experienced during the Study Period.

4. The Authority continues to be one of the most reliable overhead electric utilities in New York State based on the System Average Interruption Duration Index ("SAIDI"), System Average Interruption Frequency Index ("SAIFI"), and Customer Average Interruption Duration Index ("CAIDI") measurements provided to Burns & McDonnell.

5. LIPA continues to invest in its facilities including storm-hardening program efforts. These investments provide improved system resiliency. Burns & McDonnell observed some of the system upgrades and improvements made throughout the Study Period during the site inspections.

6. Revenues for the Study Period are sufficient to cover operation, maintenance, and repair expenses for the system during the Forecast Period. The electric revenues generated by the current electric rates are sufficient to fulfill the debt service coverage requirement defined in the covenants of the Resolutions.

7. The Authority is complying with the provisions of the Resolutions, each as amended by subsequent resolutions.

8. As of the date of this Biennial Report, the system is in good repair and sound operating condition to reliably deliver capacity and energy to the Authority's customers.

2.0 INTRODUCTION

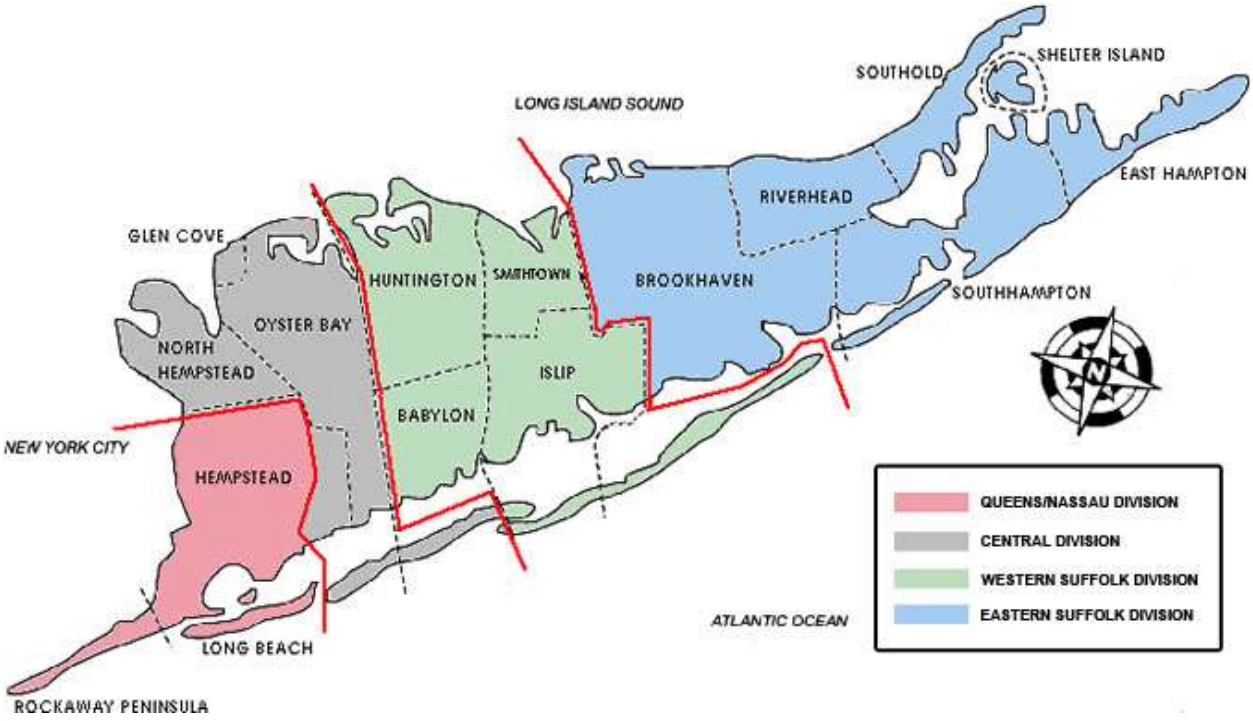
The Authority is a corporate municipal instrumentality and political subdivision of the State of New York authorized under the Act. The Authority became retail supplier of electric service in most of Nassau and Suffolk Counties and the Rockaway Peninsula of Queens County (the "Service Area") on May 28, 1998, by acquiring the Long Island Lighting Company ("LILCO") as a wholly owned subsidiary of the Authority through a merger ("LIPA/LILCO Merger"). Since the LIPA/LILCO Merger, LILCO has done business under the names LIPA and Power Supply Long Island. Before the LIPA/LILCO Merger, LILCO was a publicly traded, shareholder-owned corporation that, since the early 1900s, was the sole supplier of both retail electric and gas service in the Service Area. LIPA does not provide gas service in the Service Area. For the period prior to the LIPA/LILCO Merger, LILCO is referred to herein as LILCO and, for the subsequent period, is referred to herein as LIPA. Beginning January 1, 2014, through a competitive bidding process PSEG-LI began providing operations, maintenance, and related services for the T&D system under the OSA. Currently, PSEG-LI is the retail brand for electric service on Long Island.

The Authority, through its wholly-owned subsidiary, LIPA, owns an electric transmission and distribution system serving the Service Area, including assets, facilities, equipment, and contractual arrangements used to provide the transmission and distribution of electrical capacity and energy to electric customers within the Service Area.

2.1 System Description

The Service Area consists of the bulk of Long Island in New York State and is comprised of Nassau and Suffolk counties and the Rockaway Peninsula of Queens County, an area of approximately 1,230 square miles, excluding areas served by three municipal utilities: the Incorporated Villages of Freeport, Greenport, and Rockville Centre. Suffolk County is the easternmost county within the Service Area and covers an area of approximately 911 square miles, followed by Nassau County, with a 287 square mile area, and the Rockaway Peninsula, with an area of approximately 32 square miles. The Service Area is bounded by the Atlantic Ocean on the south and east, by the Long Island Sound on the north, and by portions of New York City on the west. Figure 2-1 displays the Service Area for LIPA.

Figure 2-1: Electric System Service Territory



As of December 31, 2023, LIPA served approximately 1.16 million retail electric customers, of whom approximately 89 percent were residential users. During the year ended December 31, 2023, residential customers provided approximately 54 percent of LIPA's annual retail electric revenues and commercial customers provided approximately 44 percent of annual retail electric revenues. The remaining balance is revenue from retail sales of public lighting, other public authorities, and miscellaneous others.

Although commercial customers provide a significant portion of annual electric sales revenues, these customers only account for approximately 11 percent of the retail electric customers served by LIPA. In general, individual commercial customers are relatively small. The Service Area contains little traditional "industrial" loads, and customers served under this rate classification are primarily large commercial customers. The single largest customer in the Service Area (the Metropolitan Transit Authority) accounted for less than two percent of total electric sales during the period of this Report and less than two percent of total retail electric revenues during the same period. In addition, the 10 largest customers in the Service Area accounted for nearly 7.6 percent of total sales and 6.2 percent of revenue.

Summary information on annual retail energy sales and retail electric revenues within the Service Area during the 2019 through 2023 period can be found in Table 1-1.

2.2 Biennial Report

In compliance with the requirements pursuant to the role of Consulting Engineer and Rate Consultant within the provisions of Section 702(b) of the General Resolution and Section 7.02 of the Subordinated Resolution, LIPA engaged Burns & McDonnell to conduct the efforts required to prepare this Report for the two years ended December 31, 2023.

2.3 Report Covenant

Pursuant to the General Resolution, the Report is to set forth the following:

i. "The Consulting Engineer's advice and recommendations as to the proper operation, maintenance, and repair of the System during the ensuing years after the Study Period, and an estimate of the amounts of money necessary for such purposes;

ii. The Consulting Engineer's advice and recommendations as to improvements which should be made during the ensuing two years, and an estimate of the amounts of money necessary for such purposes, showing the amount projected to be expended during such years from the proceeds of Bonds and Subordinated Indebtedness issued under or pursuant to the Resolution;

iii. The Rate Consultant's recommendation as to any necessary or advisable revisions of rates, fees, rents, charges and surcharges and such other advice and recommendation as it may deem desirable; and

iv. The Consulting Engineer's findings as to whether the System has been maintained in good repair and sound operating condition, and its estimate of the amount, if any, required to be expended to place such properties in such condition and the details of such expenditures and the approximate time required therefore."

2.4 Project Approach

This Report summarizes the reviews and assessments of LIPA. This Report documents Burns & McDonnell's examination of the electric system organization and management and an assessment of the utility's financial condition. The source of the financial, statistical, and operating data utilized in preparing the Report is LIPA's annual financial statements and accounting records, various operations reports, as well as Authority staff.

In the preparation of this Report, Burns & McDonnell completed desktop, and in some cases physical, assessments of the electric generating stations under contract to the Authority and the transmission and

distribution system owned by the Authority. Assessments involved interviews, observations, and review of annual expenditures from 2022 through 2023 and 2024 budgets. The adequacy of the revenues provided by the current retail rates in relation to the requirements of the Resolutions was also reviewed.

Each section of the Report summarizes specific efforts completed while conducting the Study. The Report is arranged in the following sections:

- 1.0 Executive Summary
- 2.0 Introduction
- 3.0 Organization and Management
- 4.0 Electric System and Service
- 5.0 Financial Assessment
- 6.0 Conclusions

3.0 ORGANIZATION AND MANAGEMENT

3.1 Authority Structure

Operations, performance, and costs are managed by the Service Provider, PSEG-LI, and overseen by the Authority. The management team includes engineering, legal, financial, accounting, and management professionals. The organization of this management team is described below. Through a competitive procurement process, the Authority selected PSEG through its wholly owned subsidiary, PSEG-LI, to operate LIPA's T&D System under a 12-year OSA beginning January 1, 2014.

On May 29, 2024, LIPA launched a request for proposals (RFP) to identify the future service provider to LIPA after the OSA expires on December 31, 2025 (the "2024 OSA RFP"). The 2024 OSA RFP seeks a service provider for a 10-year term to provide operations services similar to those currently being provided by PSEG-LI with certain modifications that build on the OSA reforms implemented in 2021 and give LIPA additional flexibility to achieve the State's CLCPA goals, among other changes. LIPA expects to complete the solicitation process in mid-2025, at which point the preparatory transition period to the new service provider is expected to commence and continue until the end of 2025.[5]

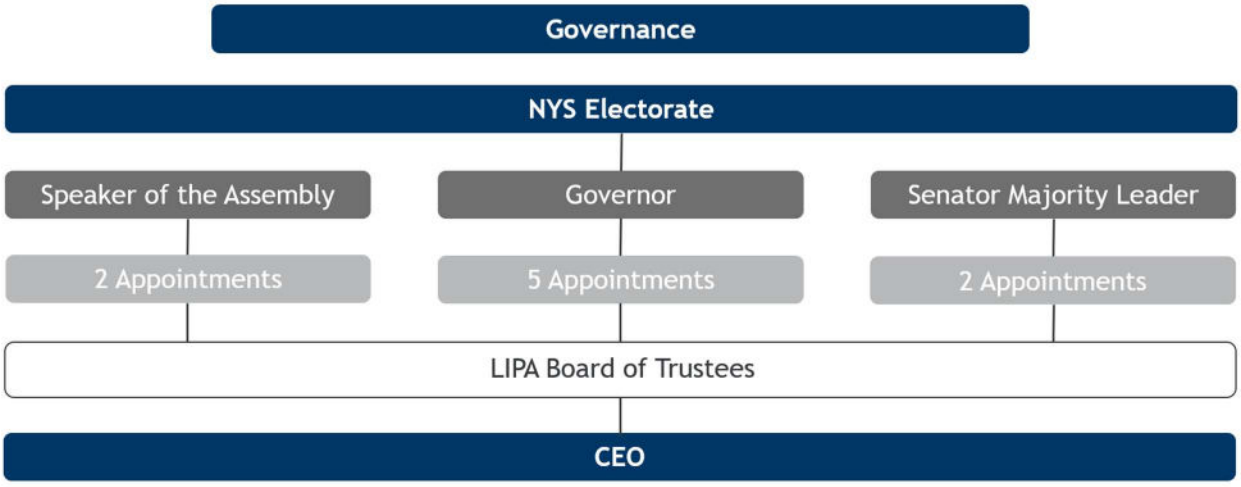
3.1.1 Board of Trustees

During the period of this Report, the Authority was governed by a nine-member Board of Trustees whose members were required under the Act to be residents of the Service Area and have utility, corporate board, or finance experience. The Governor appointed five of the Trustees. Of the four remaining, two were appointed by the Majority Leader of the New York State Senate, and two were appointed by the Speaker of the New York Assembly. The Chair of the Trustees was also appointed by the Governor. Each Trustee served for a staggered term of four years. A Trustee whose term expired continued to serve until his or her successor was appointed. Trustees do not receive compensation but are entitled to reimbursement for reasonable expenses in the performance of their duties.

Committees operated by the Board of Trustees during the period covered by this Report include: (1) finance and audit, (2) governance, planning and personnel, and (3) oversight and clean energy committees. Figure 3-1 provides the Board of Trustees organization during the biennial Study Period.

[5] ADR, p. 6.

Figure 3-1: Trustees Organization During Study Period[6]



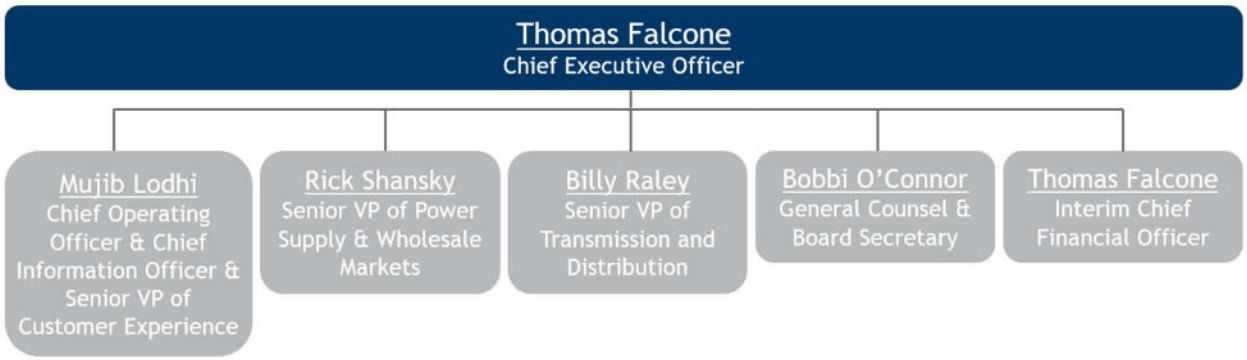
3.1.2 Authority Management

3.1.2.1 Chief Executive Officer

During the biennial period, Thomas Falcone was the Authority's Chief Executive Officer. Mr. Falcone joined the Authority in January 2014 as Chief Financial Officer and became Chief Executive Officer in September 2015. Thomas Falcone resigned his position with LIPA in March 2024. LIPA has an experienced acting CEO, John Rhodes, who has committed to remaining in the executive leadership position until a permanent replacement is identified and onboarded. An executive search is underway.

The management structure as of December 31, 2023, is depicted in Figure 3-2.

Figure 3-2: LIPA Organization Chart for Officers 2022 – 2023[7]



[6] On November 13, 2023, Governor Hochul appointed Tracey A. Edwards as Chair of the LIPA Board of Trustees.
[7] Gary Stephenson assumed the role of Senior Vice President, Power Supply upon Rick Shansky's retirement in December 2023.

3.2 Organizational Policies

3.2.1 LIPA Reform Act

The LIPA Reform Act was intended to bring accountability and transparency to the delivery of electricity by:

1. Authorizing the reformulation of the relationship between LIPA and PSEG-LI, such that PSEG-LI assumes more responsibility related to operations in the service area; the Authority's role is to oversee the activities of PSEG-LI and to meet its obligations with respect to its bonds and notes and all applicable statutes and contracts.

2. Creating a new Long Island-based office in the DPS, which is the staff arm of the New York Public Service Commission to assist with oversight of core utility operations of PSEG-LI.

3. Authorizing the retirement of a portion of the Authority's outstanding debt from the proceeds of the UDSA bonds at lower interest rates than existing indebtedness and capping or eliminating certain categories of payments in lieu of taxes, with savings passed on to ratepayers. The LIPA Reform Act was last amended in 2021 to permit UDSA to issue additional restructuring bonds in an aggregate additional amount not to exceed $8 billion. The proceeds of these restructuring bonds generated total net present value debt service savings of $579 million by refunding Authority bonds.

3.2.2 Budgeting

For the two-year period ended December 31, 2023, PSEG-LI prepared annual budgets for its costs and submitted such budgets to LIPA for review. The budgeting process considers historical revenue and expense levels and projects revenues and expenses to be incurred. Estimates are prepared for LIPA and PSEG-LI departments and compiled into a singular document to be presented to LIPA's Board of Trustees for approval. The 2024 Approved Budget was reviewed by Burns & McDonnell in conducting the investigations pertaining to this report.

According to the estimates, the electric revenues generated by the current electric rates are sufficient to fulfill the Rate Covenant requirement defined in the General Resolution, which states the Authority will establish and maintain System fees, rates, rents, charges and surcharges sufficient in each Fiscal Year so that Revenues reasonably expected to be produced in such Fiscal Year will be at least equal to the sum of:

(i) 100 percent of Debt Service, and amounts under all Parity Contract Obligations, payable by the Authority in such Fiscal Year;
(ii) 100 percent of the Operating Expenses payable in such Fiscal Year;
(iii) 100 percent of the amount necessary to pay all PILOTs payable in such Fiscal Year; and
(iv) 100 percent of the amount necessary to pay other Required Deposits, all other payments required pursuant to the Resolution and the Financing Agreement, and all other payments required for the System, for such Fiscal Year.

3.2.3 Audited Financial Statements

In compliance with the requirements pursuant to the General Resolution, LIPA retains an independent accountant, on an annual basis, to audit the Financial Statements prepared by staff. The General Resolution requires the following:

> *"The Authority shall keep or cause to be kept proper books of record and account (separate from all other records and accounts) in which complete and correct entries shall be made of its transactions under the Resolution and which, together with all other books and papers of the Authority, shall at all reasonable times be subject to the inspection of the Trustee or the representative, duly authorized in writing, of the Holder or Holders of not less than 25% in principal amount of the Bonds then Outstanding. Such books of account are to be audited at least annually by independent certified public accountants experienced in public finance and electric utility accounting selected by the Authority. A copy of each audit report, annual balance sheet and income and expense statement shall be filed with the Trustee and sent to any Owner filing with the Authority a written request therefor."*

LIPA has been successful at meeting its auditing requirements for the period.

3.2.4 Rate Studies

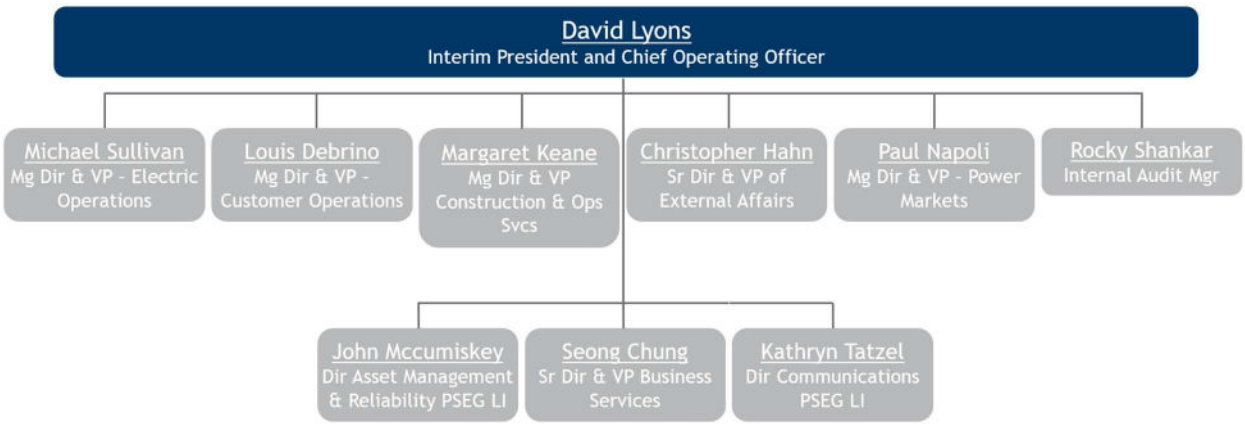
The Authority is empowered to set rates for electric service in the service area without being required by law to obtain approval of the PSC, DPS or any other State regulatory body. However, the Authority agreed in connection with the approval of the LIPA/LILCO Merger by the Public Authority Control Board ("PACB") in 1998 that it would not impose any permanent increase, nor extend or reestablish any portion of a temporary rate increase, in average customer rates over a 12-month period in excess of 2.5 percent without the approval of the PSC, following a full evidentiary hearing. Under the LIPA Reform Act, that PACB condition has been superseded by a rate-setting process that provides for DPS review of any future rate proposal that leads to aggregate revenues of the Authority to increase by more than 2.5 percent on an annual basis. LIPA's utility rate schedule is structured with fixed customer charges for all customer classes, seasonal energy rates for all customer classes except street lighting, and seasonally differentiated demand charges for non-residential customer classes.

On November 3, 2021, PSEG-LI submitted to LIPA proposed rate changes to reflect updates to 2022 electric service rates consistent with the proposed 2022 budget. It was PSEG-LI's estimation that the increase to LIPA's aggregate annual revenues resulting from such changes would not exceed 2.5 percent. The proposed revenue and rates do not reflect changes in the Delivery Service Adjustment, Revenue Decoupling Mechanism, or other cost recovery mechanisms. LIPA's base rate has not exceeded the 2.5 percent threshold since the three-year plan expired at the end of 2018. As a result, no rate proposal has been submitted to the DPS.

3.2.5 Primary Operating Agreement

Effective January 1, 2014, PSEG-LI, a wholly-owned subsidiary of PSEG fully dedicated to the Authority's Long Island operations began providing operations, maintenance, and related services for the T&D system under the OSA. The OSA expires December 31, 2025. Beginning January 1, 2015, an affiliate of PSEG-LI (PSEG ER&T) assumed certain power supply management, fuel procurement, and related services that were historically provided pursuant to separate agreements between the Authority and other service providers. PSEG-LI organization is shown below in Figure 3-3.

Figure 3-3: PSEG-LI Organization (2023)



3.2.5.1 OSA Reforms

In August of 2020, Tropical Storm Isaias landed on Long Island and the Rockaways with rain and wind gusts up to 70 miles per hour. The resulting damage to the electric system caused approximately 646,000 customers outages with approximately $300 million in response and restoration costs. During the storm, the OMS and telephone system failed, which are mission-critical information technologies used to restore power outages, assess damage, estimate customer restoration times, dispatch trucks, and communicate with customers. DPS conducted an investigation into the performance of PSEG-LI and concluded that

PSEG-LI failed to properly anticipate and respond to the weather emergency in accordance with its approved ERP. This led to the creation of the Second A&R OSA, effective as of April 2022.

3.2.6 Second Amended and Restated Operations Services Agreement

In April 2022, LIPA and PSEG Long Island began operating under a new, reformed contract, the Second Amended and Restated Operations Services Agreement. This reformed contract increases the amount of PSEG Long Island's annual compensation at risk from $10 million to $40 million; subjects PSEG Long Island to up to 110 detailed Performance Metrics set annually by the Board with a recommendation by the DPS to ensure PSEG Long Island meets the Board's strategic direction for service to customers and industry best practices. The Second A&R OSA eliminates PSEG LI's eight-year term extension option and will expire on December 31, 2025.

3.2.7 2024 OSA RFP

On May 29, 2024, LIPA launched a request for proposals (RFP) to identify the future service provider to LIPA after the OSA expires on December 31, 2025 (the "2024 OSA RFP"). The 2024 OSA RFP seeks a service provider for a 10-year term to provide operations services similar to those currently being provided by PSEG Long Island with certain modifications that build on the OSA reforms implemented in 2021 and give LIPA additional flexibility to achieve the State's CLCPA goals, among other changes. LIPA expects to complete the solicitation process in mid-2025, at which point the preparatory transition period to the new service provider is expected to commence and continue until the end of 2025.

3.2.8 2024 PSMFM RFP

On May 30, 2024, LIPA launched an RFP to identify the future service provider to LIPA after its agreements for power supply management services and fuel management services with PSEG ER&T expire on December 31, 2025 (the "2024 PSMFM RFP"). The 2024 PSMFM RFP seeks a service provider for a 5-year term to provide power supply management services and fuel management services similar to those currently being provided by PSEG ER&T with certain modifications. LIPA expects to complete the solicitation process in mid-2025, at which point the preparatory transition period to the new service provider is expected to commence and continue until the end of 2025. [8]

[8] ADR, page 6.

4.0 ELECTRIC SYSTEM AND SERVICE

LIPA's electric system primarily consists of transmission and distribution assets and an 18 percent ownership in the Nine Mile Point 2 Nuclear Power Station. Additionally, the Authority has various power supply contracts, which are described below.

4.1 Nine Mile Point 2 Generating Station

Nine Mile Point (NMP) Nuclear Power Station is located on the south shore of Lake Ontario in the Town of Scriba, New York. NMP has two separate nuclear power stations, designated as NMP1 and NMP2. LIPA holds 18 percent ownership in the NMP2. Constellation Energy Generation, LLC (Constellation) owns 100 percent of NMP1 and 82 percent of NMP2. NMP2 consists of a boiling water reactor and General Electric turbine generator and operates under licensing from the NRC, set to expire in 2046.

LIPA has entered into an operating agreement with Constellation for NMP2, which Constellation. As part of the agreement, LIPA and Constellation each have one representative on a management committee, which meets to discuss plant matters. Final budgets are prepared by Constellation and sent to LIPA for annual approval. LIPA is responsible for its ownership portion of operating costs and capital investments associated with NMP2 each year.

4.1.1 Plant Performance of NMP2

NMP2 typically performs at higher capacity factors compared to industry nuclear averages. Table 4-1 displays comparative capacity factors for years 2019 through 2023. Generation values within Table 4-1 only reflect 18 percent of total generation from NMP2, capturing only LIPA's 18 percent, partial ownership.

Table 4-1: NMP2 Plant Performance

Year	Annual Net Generation (MWh) [1] [2]	Annual Net Capacity Factor	Three Year Average Net Capacity Factor	Industry Average Net Capacity Factor
2019	2,021,035	98.7	94.6	93.5
2020	1,842,557	90.0	91.9	92.4
2021	2,022,272	98.8	95.1	92.8
2022	1,782,169	87.1	91.4	92.7
2023	1,962,053	95.9	94.1	93.1

[1] Source: LIPA ADR page 42
[2] Generation values shown are for LIPA's percentage of the plant generation.

4.2 Transmission and Distribution System

LIPA's transmission and distribution system consists of overhead and underground facilities, vehicles, equipment, land parcels, easements, contractual arrangements, and other assets used to provide the transmission and distribution of electric capacity and energy to and within the Service Area. The T&D System includes seven transmission interconnections that link it to utilities outside the Service Area. With the exception of line Y-49, all of these transmission interconnections are either owned in part or under contract to LIPA. These transmission interconnections enable the delivery of:

1. Capacity and energy produced by NMP2,
2. Additional off-system capacity resources needed to meet the peak demands of the electric customers,
3. Diversified energy, often providing lower prices, to supplement or displace generation from on-island generating resources, and
4. Excess generation from on-island generating facilities to off-island purchasers when conditions merit.

Table 4-2 provides summary information on the transmission interconnections.

Table 4-2: LIPA Interconnections

Name	Off System Terminal Location	Interconnecting Utility	Voltage Level (kV)	AC/DC
Dunwoodie to Shore Road (Y-50)	Westchester County, NY	Con Edison	345	AC
East Garden City to Sprain Brook (Y-49)*	Westchester County, NY	Con Edison	345	AC
Northport to Norwalk Harbor (NNC)	Norwalk, CT	CL&P	138	AC
Shoreham to East Shore (Cross Sound Cable)	New Haven, CT	UI	138	DC
Jamaica to Lake Success	Queens, NY	Con Edison	138	AC
Jamaica to Valley Stream	Queens, NY	Con Edison	138	AC
Sayreville to Levittown (Neptune Cable)	Sayreville, NJ	JCP&L	345	DC

*Cable is owned by NYPA

Four submarine cables installed under Long Island Sound form part of the interconnection between the T&D System and other utility systems in upstate New York and Connecticut:

1. Dunwoodie to Shore Road (Y-50)
2. East Garden City to Sprain Brook (Y-49)
3. Northport to Norwalk Harbor (NNC)
4. Shoreham to East Shore (Cross Sound Cable)

A fifth submarine cable (Sayreville to Levittown, also known as the Neptune Cable) connects LIPA's service area with New Jersey and allows for the purchase of energy and capacity from resources in the Pennsylvania-New Jersey-Maryland region ("PJM").

The Dunwoodie to Shore Road line, designated as the Y-50 line and placed in operation in August 1978, is an 18-mile 345-kilovolt ("kV") cable jointly owned with Con Edison. This cable is of pipe-type construction in which dielectric fluid is circulated to cool the conductors and maintain the electrical insulation. The cable operates at full capacity with a 656 MW normal rating and a 914 MW emergency rating. Power is wheeled over this cable to the two 138 kV cables to Jamaica for delivery to Con Edison.

The East Garden City to Sprain Brook interconnection (the "Y-49 Cable"), installed in 1991, is another major transmission interconnection. The Y-49 Cable comprises submarine and land-based portions totaling approximately 23 miles. This line is owned entirely by NYPA; however, most of the capacity of the Y-49 Cable was used by LIPA under the terms of a 1991 contract with NYPA. The Y-49 Cable contract was set to expire in November 2022 but was extended to May 2023, pending completion of NYPA's reconducting of cable for the Long Island's onshore portion. The reconductoring project was completed in May 2023. Following the expiration of its contract with LIPA, NYPA has continued to operate the line to import power to Long Island.

The cable from Northport to Norwalk Harbor (the "NNC"), which was installed in 2008 to replace the original cable installed in 1969, extends approximately twelve miles under the Long Island Sound from the Northport generating station in Suffolk County, New York, to Norwalk Harbor, Connecticut. LIPA owns that portion of the line from Northport to the New York-Connecticut state boundary.

The high voltage direct current ("HVDC") cable from Shoreham to New Haven (the "Cross Sound Cable" or "CSC") was constructed under a firm transmission capacity purchase agreement (the "CSC Agreement") signed between LIPA and Cross Sound Cable Company, LLC ("CSC LLC") in 2000 under which LIPA agreed to purchase up to 330 MW of transmission capacity. The CSC is owned by CSC LLC. The CSC Agreement, as amended, expires in 2032. The CSC became operational in June 2004.

In September 2005, LIPA signed a 20-year firm transmission capacity purchase agreement with Neptune Regional Transmission System LLC ("Neptune") to permit LIPA to import power from New Jersey over an undersea HVDC transmission cable (the "Neptune Cable") capable of carrying 660 MW of electricity. The Neptune Cable owned by Neptune, runs from Sayreville, New Jersey, under the Atlantic Ocean and connects with LIPA at its Newbridge Road substation in Levittown. The cable became operational in July 2007.

The two remaining Service Area transmission interconnections (the Jamaica to Lake Success and the Jamaica to Valley Stream cables) are linked to the Con Edison transmission system in Queens County, New York. LIPA owns these facilities to the border of Nassau and Queens Counties, at which point ownership transfers to Con Edison. These ties are employed primarily for the delivery of power to Con Edison from its portion of energy flowing across Y-50.

The transmission facilities provide for the delivery of capacity and energy from the transmission interconnections and the on-island generating stations to LIPA's electric distribution system. As of December 31, 2023, LIPA reported the transmission system consisted of approximately 1,400 miles of overhead and underground lines, with voltage levels ranging from 23 kV to 345 kV. This transmission system has been constructed following standards similar to those employed by other major electric utilities in the Northeast and includes wood poles, steel poles, and lattice steel towers. Many of the existing transmission structures support distribution circuits and/or connections for telephone, cable television, or fiber optics.

The transmission system includes transformation equipment at 30 generating sites that is used to step up the generation voltage to transmission voltage levels.

LIPA is currently completing a multi-year program to replace its Transmission Control Center ("TCC") with a modern grid control room and a modern backup facility. The new TCC is designed to provide more resilient grid operations and integrate a high penetration of renewables.

4.2.2 Substation Descriptions

Burns & McDonnell selected and inspected seven substations across the LIPA system to serve as a representative sample. Inspections were guided by PSEG-LI. The substations visited included:

8T Eastport	**8WF William Floyd**	**8DR Wildwood**	**6DL Pilgrim**
6P Pulaski	**6U Ruland Road**	**5R Bellmore**	

The inspected sample represented a variety of transmission and distribution substations with different voltage levels and ages. Overall, the substations were clean and in good operating condition. Based on the substation inspections, Burns & McDonnell has general recommendations regarding substation operation and maintenance:

1. It was noted in several substations that the pile caps had begun to deteriorate and crumble on many footings, as shown in Figure 4-1. While these issues are minor in nature and do not

represent an immediate concern, Burns & McDonnell recommends that PSEG-LI consider addressing the deterioration before it becomes more serious. Burns & McDonnell did observe evidence that improvements are being made to address this issue.

Figure 4-1: Pile Cap Deterioration

2. In general, most of the stations are in clean, working order. However, several stations with aging equipment have oil absorbent pads placed around the base of a transformer or noticeable amounts of oil within the transformer containment pit from recent maintenance performed on the transformer. Burns & McDonnell recommends that PSEG-LI consider inspecting stations with aging oil-filled equipment, identifying possible leaks and making the necessary repairs. Oil containment pits should be inspected, and any standing oil should be disposed of in accordance with PSEG-LI's Spill Prevention, Control, and Countermeasure ("SPCC") plan.

3. In several substations, the equipment labels were noted to be faded and unreadable. Some of the transmission line labels were completely faded, which can lead to misoperation during switching. Burns & McDonnell recommends that PSEG-LI consider relabeling equipment.

4.2.2.1 8T Eastport

Overall, the 8T Eastport substation is functionally acceptable and in suitable condition. A portion of the substation was upgraded and expanded around 10 years ago. The area of the substation not upgraded

shows signs of aging equipment, as one of the Maloney transformers in service was manufactured in the late 1960s and shows signs of corrosion, which is not uncommon for a transformer of this vintage. A regulator bank showed signs of oil leakage. Figure 4-2 provides a picture of the Moloney transformer.

Figure 4-2: Moloney Transformer in Eastport Substation

4.2.2.2 8WF William Floyd

The 8WF William Floyd substation is in overall good condition. There are small signs of wear and fracture of the pile caps that the substation equipment sits on. There are also large areas on the ground where the gravel is not distributed over in the substation. There are four (4) transmission lines coming into the substation which connect two (2) power transformers to the distribution system. The 13kV distribution system consists of two (2) sets of switchgear. Figure 4-3 shows the overall condition of the station.

Figure 4-3: Overall Condition of 8WF William Floyd Substation

4.2.2.3 8DR Wildwood

The 8DR Wildwood substation is in overall good condition. The site was clean, and the equipment appears to be well maintained. However, some of the steel support structures show signs of aging and oxidation. There are signs of a previous oil leak around equipment at both 138kV and 69kV sides of the station. Figure 4-4 provides evidence of the current site condition.

Figure 4-4: Site Condition in Wildwood Substation

4.2.2.4 6DL Pilgrim

The 6DL Pilgrim substation appears to be functionally acceptable and in suitable condition. The substation site was mostly clean and well-maintained. There are oil absorbent pads draped around the base of one of the transformers indicating a possible leak or faulty valve. Various equipment in this substation shows signs of aging and wear which is expected over time. Figure 4-5 shows the overall condition of the station.

Figure 4-5: Pilgrim Substation

4.2.2.5 6P Pulaski

The 6P Pulaski substation was in good condition and very clean. During the site inspection, it was noticed that sump pumps within the oil containment pits for the transformers were not working, and water was visibly close to the top of transformer containment. Figure 4-6 shows the overall condition of the station.

Figure 4-6: Pulaski Substation

4.2.2.6 6U Ruland

The 6U Ruland substation is functionally acceptable and in suitable condition. There are oil absorbent pads draped around the base of one of the transformers indicating a possible leak or faulty valve. This should be assessed, and the appropriate actions taken to remediate the transformer as shown in Figure 4-7. Some areas throughout the station lack crushed stone at grade. There are some signs of aging and wear on the electrical equipment and steel supports throughout the station.

Figure 4-7: Signs of a Transformer Oil Leak at Ruland Substation

4.2.2.7 5R Bellmore

The 5R Bellmore substation appears to be in suitable condition, and the site was clean. There are signs of aging and wear on the electrical equipment and steel supports at the station. During the site inspection, it was noted that half of the station had been upgraded while the other half had not been. It appears that the transformers have had an oil leak at some point based on oil absorbent pads present. The existing transformers should be thoroughly inspected and should be planned to be replaced as part of an equipment

renewal and replacement program. Just outside of the substation, there are tree branches on the top of the overhead distribution cable which should be trimmed as part of vegetation maintenance. The driveway lacks appropriate gravel coverage. Figure 4-8 shows the condition of the Bellmore Substation drive path and tree branches in the station.

Figure 4-8: Bellmore Substation

4.3 Distribution Plant

LIPA reports that the distribution system included approximately 14,000 primary circuit miles of overhead and underground line (9,000 miles of overhead line and 5,000 miles of underground line). As of December 31, 2023, 157 substations throughout the service area step down the transmission voltage to distribution levels. A portion of the poles on which LIPA's distribution facilities have been installed are owned by Verizon and used by LIPA pursuant to a joint-use agreement.

4.4 Major Maintenance and Capital Improvements

Capital and deferred expenditures, including Nine Mile Point 2 for 2022 and 2023, respectively, were $671.9 million and $743.9 million. Such expenditures included reliability enhancements, capability expansion, new customer connections, facility replacements and public works. Burns & McDonnell reviewed the detailed 2024 budget (including projected 2025 capital expenditures), and the LIPA-PSEG Long Island 5-Year Strategic Roadmap (2023 to 2027)[9]. Capital expenditures for 2024 in the approved budget are $905.4 million. The capital expenditure program provides for a continuation of programs to maintain reliability and quality of electric service, as well as a significant effort in improving system resiliency through a multi-year storm-hardening program. The 5-Year Strategic Roadmap for transmission and distribution focuses on the following goals:

1. Adopt a programmatic approach to asset management based on industry best practices.
2. Apply modern system design and innovative technology to improve overall system performance.
3. Facilitate the interconnection of renewable and distributed resources while ensuring reliable T&D system performance.
4. Reduce the number and duration of outages caused by storms and other emergencies.
5. Protect the LIPA grid from natural hazards and unauthorized access and disruption.
6. Provide a safe environment for LIPA's dedicated workforce and the public.

Within the five-year plan is continued significant investment in its storm hardening program, with $75 million in planned investment annually from 2024-2027.

4.5 Power Supply and Electric Load

LIPA receives power supply from National Grid Generation LLC ("GENCO") facilities, the NMP2 facility, the FitzPatrick Nuclear Power Plant, and Independent Power Producers ("IPPs") on Long Island and elsewhere. Table 4-3 displays the capacity and energy breakdown between power supplies for LIPA

[9] https://www.lipower.org/wp-content/uploads/2023/02/6.-Discussion-of-Strategic-Planning-Roadmaps.pdf

over the previous 5 years. On average, LIPA receives approximately 10 percent of its energy through its proportionate share of NMP2 generation, 22 percent GENCO power, and 68 percent through other IPPs and spot purchases.

Table 4-3: Historical Power Supply

	2019	2020	2021	2022	2023
Peak Demand (MW)	5,269	5,203	4,984	5,025	4,820
Capacity					
Nuclear	232	233	232	231	229
Purchased Capacity					
GENCO	3,702	3,692	3,604	3,560	3,513
Other Purchased	1,824	1,720	1,619	1,753	2,070
Total Capacity	5,758	5,645	5,455	5,544	5,812
Reserve Margin					
MW	488	442	471	518	992
Percent	9.3%	8.5%	9.5%	10.3%	20.6%
Energy (MWh)					
Nuclear	2,021,035	1,842,557	2,022,272	1,782,169	1,962,053
Purchased Energy					
GENCO	3,780,336	4,912,614	5,989,662	4,663,270	4,153,009
Other Purchased	14,302,701	13,068,193	11,939,408	13,438,614	13,008,954
Total Energy	20,104,072	19,823,364	19,951,342	19,884,053	19,124,016
Energy (MWh)					
Nuclear	10.05%	9.29%	10.14%	8.96%	10.26%
Purchased Energy					
GENCO	18.80%	24.78%	30.02%	23.45%	21.72%
Other Purchased	71.14%	65.92%	59.84%	67.58%	68.02%

4.5.1 Resource Plan

PSEG-LI conducted an Integrated Resource Plan ("IRP") that was released to the public in November 2023, which analyzed the generation and transmission investments LIPA may need to initiate over 17 years (2023-2040). Decisions on needs identified beyond the next several years will be deferred until after a future IRP study, as changing electric grid conditions could alter future investment. The IRP forecast expects to retire up to 800 MW of existing Long Island power plants by 2030. This reduction is primarily due to greater adoption of energy efficiency, solar, wind and battery storage, which is consistent with state and national trends.

The Governor, in his 2019 State of the State Address, introduced the Green New Deal plan. That plan was largely incorporated into the CLCPA, which was signed into law by the Governor on July 18, 2019. On April 8, 2020, the Energy Planning Board amended its State Energy Plan (the "SEP"), which was released

in 2015 and coordinates state agencies that impact energy policy in light of the enactment of the CLCPA. As amended, the SEP sets the following clean energy and climate targets for the State to meet: (i) a 40 percent reduction in greenhouse gas ("GHG") emissions from 1990 levels by 2030; (ii) 70 percent of electric generation from renewable energy sources by 2030; (iii) 185 trillion BTU increase in on-site energy savings from 2015 baseline by 2025; (iv) 100 percent carbon free electricity by 2040; (v) 85 percent reduction in GHG emissions from 1990 levels by 2050; (vi) 9,000 MW of offshore wind by 2035; (vii) 6,000 MW of distributed solar by 2025; (viii) 3,000 MW of energy storage by 2030; and (ix) 40 percent goal, and a minimum target of 35 percent, of overall benefits from investments in clean energy and energy efficiency to be realized by disadvantaged communities. Furthermore, the amended SEP adds a new initiative to establish a sustainable electric generation facility cessation mitigation program, calling on state entities to advance strategies to mitigate the impact of power plant closures on hosting communities.

4.5.1.1 Wind

The Authority and PSEG-LI are participating in the development of the State's Offshore Wind Master Plan, which involves efforts to license and procure sufficient offshore wind resources to meet the State's goal of 9,000 MW of such resources by 2035. It is expected that at least 3,000 MW of those resources will likely be interconnected to the LIPA T&D System. Studies are underway to examine the need for transmission reinforcements and flexible resources (e.g., peaking plants and energy storage) to enable the reliable and cost-effective integration of offshore wind into the local and regional power grid.

4.5.1.2 Solar

LIPA estimates to have 1,200 MW of rooftop solar and 200 MW of solar farms installed and online by 2030. LIPA has realized greater solar adoption by offering net metering, which allows customers to bank credits for the electricity they generate when it exceeds the amount of electricity they are consuming.

4.5.1.3 Battery Storage

LIPA plans to have 750 MW of battery energy storage installed and online by 2030. At the end of 2023, LIPA had an open solicitation for 175 MW of utility scale battery storage to be located on Long Island. Negotiations are ongoing with several developers for projects to be completed in 2025. LIPA plans to fulfill the remaining 575 MW of targeted battery capacity before 2030.

4.5.1.4 Time of Day Rates

The IRP estimates a 270 MW peak load reduction from Time of Day rates by 2030 or roughly 6 percent of the total system peak load.

4.5.1.5 Portfolio Management

Most of LIPA's power purchase agreements are subject to renewal by 2030, so the portfolio can be reshaped based on the evolving demand and supply outlook for the post-2030 period.

4.5.2 Outstanding Power Supply Requests for Proposals

In May 2020, the Board approved a 20 MW feed-in tariff program called Solar Communities, which benefits low- and moderate-income residential customers. Awards were made to four projects, which currently have power purchase agreements for a total of 12 MW. Three projects (7 MW) are in active development, and one (5 MW) is in final permitting stage. As of June 30, 2022, the program is closed for new applications.[10]

LIPA is currently in negotiations with a developer to acquire up to three new utility-scale battery storage projects, totaling 179 MW of energy storage if all three projects reach contract execution. The three projects will help LIPA meet a portion of its load ratio share of the State's energy storage deployment goal established in the Climate Act, which is currently projected to be about 750 MW by 2030. The contract negotiations stem from an April 2021 Request for Proposals soliciting bids for the development of bulk energy storage projects to be located on Long Island under build-own-transfer contracts, with LIPA having an option to take ownership after seven years of operation.

4.6 System Reliability

LIPA is committed to providing reliable electric service. Three common measurements used to track reliability are the Customer Average Interruption Duration Index ("CAIDI"), System Average Interruption Duration Index ("SAIDI"), and the System Average Interruption Frequency Index ("SAIFI"). CAIDI is measured by dividing the sum of all customer interruption duration in minutes by the total number of customer interruptions. SAIDI is similar to the CAIDI measurement, but the interruption duration is divided by total number of customers served by the system. SAIFI provides a measure of customers being interrupted annually and is calculated by dividing the total number of customers interrupted by the total number of customers served. Over the past 20 years, LIPA's investments in the transmission and distribution system have resulted in LIPA being one of the most reliable overhead electric utilities in New York State based on SAIDI minutes, SAIFI interruptions/year, and CAIDI minutes measurements[11]. Results for these metrics over the previous five years (including the 5-year average) are displayed in Table 4-4.

[10] ADR, p. 48.
[11] 2022 Electric Reliability Performance Report., p. 38.

Table 4-4: Reliability Measurements

	2019	2020	2021	2022	2023	5-Year Average
SAIDI (Minutes)	51.40	66.00	54.70	56.00	56.30	56.88
SAIFI (Interruptions/Year)	0.67	0.80	0.68	0.68	0.69	0.70
CAIDI (Minutes)	76.30	82.90	80.50	82.20	82.00	80.78

Beginning in 2016, the Authority and PSEG-LI began several initiatives to improve the reliability and resiliency of the T&D System, including adopting new tree-trimming standards and a new multi-year storm hardening initiative. Since that time, the average outage duration for each customer served has declined from 75.5 minutes in 2016 to 56.3 minutes in 2023 (a 25 percent decline). The number of customers experiencing multiple sustained outages (4 or more outages per year) has declined from 70,248 in 2016 to 23,730 in 2023 (a 66 percent decline), while the average number of momentary interruptions experienced by customers has declined from 3.92 in 2016 to 1.45 in 2023 (a 63 percent decline).[12]

[12] ADR, p. 38.

5.0 FINANCIAL ASSESSMENT

The summary review of financial results of the electric system for the two-year period ended December 31, 2023 is provided herein.

5.1 Electric Rates

5.1.1 Rate Covenant

Provisions of Electric System General Revenue Bond Resolution, adopted May 13, 1998, as supplemented and amended from time to time, mandates LIPA establish service rates and collect fees sufficient to pay all expenses associated with utility operations, including maintaining the appropriate level of reserves as well as maintaining an annual minimum debt service coverage of 100 percent. The debt service coverage minimum has been reduced from 120 to 100 percent, because LIPA has retired, other than from proceeds of Bonds or Subordinated Indebtedness, an amount equal to 25 percent of the Acquisition Debt net of the then outstanding balance of the Promissory Notes. The Rate Covenant provisions of the General Resolution states the following:

> *"The Authority shall review, or cause the Subsidiary to review, the adequacy of System fees, rates, rents, charges and surcharges at least annually. If such annual or more frequent review, or the report of the Rate Consultant pursuant to Section 702, indicates that the rates, fees, rents, charges and surcharges are, or will be, insufficient to meet the requirements of this Section 701, the Authority shall promptly take, or cause the Subsidiary to take, the necessary action to cure or avoid any such deficiency except as otherwise may be provided by subsection (d) of this Section."*

5.1.2 Regulation

The Authority is operated under the direction of the Board of Trustees. The Authority has the power to determine and alter rates charged without needing the approval of the PSC. The Authority agreed that it would not impose any permanent increase, nor extend or reestablish any portion of a temporary rate increase, in average customer rates over a 12-month period in excess of 2.5 percent without a positive recommendation from the PSC, following a full evidentiary hearing. Under the LIPA Reform Act, that PACB condition has been superseded by the rate-setting process which provides for DPS review of any future rate proposal that leads to aggregate revenues of the Authority to increase by more than 2.5 percent on an annual basis.

Throughout the Study Period no rate proposal was submitted to the DPS. However, LIPA provides DPS with the annual budget and rate adjustments.

LIPA's base retail electric rates generally reflect traditional rate designs and include fixed customer charges for all customer classes, seasonal energy rates for all customer classes except street lighting, and seasonally differentiated demand charges for non-residential customer classes (greater than 7 kW). Economic development and load retention incentives are provided to a small number of commercial customers. Miscellaneous service charges, pole attachment charges, and wireless rental rates are also assessed on a monthly basis. In addition to the base delivery service charges, the Authority's charges include a Power Supply Charge, a PILOT payments recovery rider, a rider providing for the recovery of the Suffolk Property Tax Settlement, a Distributed Energy Resources Charge to recover the costs of LIPA's customer-side efficiency and renewable programs (formerly known as the Energy Efficiency and Renewable Resource Charge), a Visual Benefits Assessment Charge to recover the incremental cost of burying approximately 45 percent of the Southampton to Bridgehampton transmission line that was originally planned as overhead facilities, a Revenue Decoupling Mechanism (described below), a Delivery Service Adjustment Charge (described below) and the New York State Assessment Charge to recover the cost of the Temporary State Energy and Utility Conservation Assessment and Department of Public Service Assessment (authorized by Public Service Law Section 18-a and the LIPA Reform Act).

The Delivery Service Adjustment provides cost recovery for certain items that can vary significantly due to external factors, which items include, among others: debt service (variances in interest rates, capital expenditures and savings derived from UDSA's financings); and storm expenditures (variances from the amounts budgeted for storm restoration expenses in base rates). The Delivery Service Adjustment is expected to be calculated through the end of September each year, which allows for the bill impact to be known in advance of annual budget approval. Any adjustment would be implemented on the following January 1st and reviewed by DPS.

In addition, the Recommendation affirmed the Authority's use of a "Revenue Decoupling Mechanism." The Authority's Board initially modified its tariff to establish a Revenue Decoupling Mechanism in March 2015 as an "Adjustment to Rates and Charges," which PSEG-LI is authorized to calculate and update each year according to the pre-defined terms of the tariff. All six of the major New York state electric utilities have Revenue Decoupling Mechanisms within their tariffs for delivery service. Mechanically, Revenue Decoupling Mechanisms function by comparing actual revenues with authorized revenues and crediting (or collecting) any differences to (or from) customers in a subsequent period; it is intended to cover all sources of variances in delivery service revenues including, among other things, any net lost revenues attributable to the implementation of energy efficiency or net metering programs, any revenue variances (positive or negative) caused by weather patterns, and revenue variances (positive or negative) that result from changes in economic conditions.

5.1.3 Rate Tariff Modifications

LIPA Board of Trustees voted on March 29, 2023, to modernize its standard electric rate for residential customers with new Time-of-Day ("TOD") rates. Residential customers will now have two TOD rate options. With two TOD rate options (Rate 194 and Rate 195), customers pay different rates for electricity based on when they use it. Electric rates are higher during weekdays from 3:00 pm to 7:00 pm. ("peak" hours) but lower all other hours of the day and on weekends and holidays ("off-peak" and "super off-peak hours). TOD rates are a common practice in the electric utility industry. LIPA estimates that it will be able to shift 6 percent of its peak demand by 2030 based on information provided to Burns & McDonnell in the 2023 IRP.[13]

5.2 Financial Results

The total revenue of LIPA for the two-year period ended December 31, 2023 included revenue from charges for electric service, wholesale services, as well as miscellaneous revenues from items such as rents, late payment charges, reconnection fees, etc. LIPA's auditor, KPMG LLP, performs an annual review of the Rate Covenant to determine compliance with the requirement of the General Resolution. The evaluation process of Rate Covenant compliance completed by LIPA's independent auditor include a comparison of all line-item amounts presented for the Rate Covenant Calculation, recalculation of mathematical accuracy for both Rate Covenant Calculations and coverage calculations, and a comparison of reported Rate Stabilization Fund balances to accompanying bank statements. For the periods of this review, LIPA calculations of the Rate Covenant, as reviewed by its independent accounting firm, show that LIPA has complied with its financial obligations under the Resolution.

LIPA customers are billed for electric service based on rate schedules, tariffs, or contracts that reflect the costs to the utility of providing that service. For purposes of designing electric rates, customers with similar load and service characteristics should be placed in the same rate classification.

5.2.1 Operating Results

Table 5-1 presents a summary of the energy sales, the number of customers, and the average energy usage per customer by class for 2022 and 2023. Total system energy sales were 18,743 GWh in 2022 and 18,007 GWh in 2023.

[13] ADR, p. 10.

Table 5-1: Energy Sales and Customers by Class

	2022	2023
Energy Sales (MWh)		
Residential	9,390,891	8,878,605
Commercial and Industrial	8,862,909	8,625,359
Other	488,702	503,188
Total Sales	18,742,503	18,007,152
Customers		
Residential	1,026,632	1,028,015
Commercial and Industrial	119,328	121,601
Other	5,622	5,627
Total Customers	1,151,583	1,155,243
Energy per Customer (MWh/Customer)		
Residential	9.1	8.6
Commercial and Industrial	74.3	70.9
Other	86.9	89.4
Total Sales	16.3	15.6

Annual revenues from sales, revenue per kWh ratios, and average revenue per customer ratios for each customer classification are presented in Table 5-2. During the period of this report, total revenue from sales to electric customers was $4.28 billion in 2022 and $3.70 billion in 2023.

Table 5-2: Revenues and Sales Ratios by Class

	2022	2023
Revenue ($000)		
Residential	$2,283,553	$1,987,845
Commercial and Industrial	1,881,656	1,612,543
Other	113,949	98,445
Total Revenue	$4,279,158	$3,698,833
Energy (MWh)		
Residential	9,390,891	8,878,605
Commercial and Industrial	8,862,909	8,625,359
Other	488,702	503,188
Total Sales	18,742,502	18,007,152
Customer		
Residential	1,026,632	1,028,015
Commercial and Industrial	119,328	121,601
Other	5,622	5,627
Total Customers	1,151,583	1,155,243
Revenue/kWh		
Residential	$ 0.2432	$ 0.2239
Commercial and Industrial	0.2123	0.1870
Other	0.2332	0.1956
Total Energy Sales	$ 0.2283	$ 0.2054
Revenue/Customer ($/Customer)		
Residential	$ 2,224	$ 1,934
Commercial and Industrial	$ 15,769	$ 13,261
Other	$ 20,267	$ 17,495

LIPA's largest cost in providing electric service to its customers for each year of the period was fuel and the wholesale cost of power. LIPA purchased power from a number of different entities during the time of the Study. LIPA receives the majority of its power from various Independent Power Producers as shown previously in Table 4-3. The Fuel and Purchased Power costs are adjusted and collected monthly through the Power Supply Charge.

The significance of the annual power supply costs is illustrated in Table 5-3. The top portion of the table shows net operating revenue as the difference between total revenues generated by the delivery rates and the recovery of power supply costs. The ratios of power supply cost to sales revenues were calculated for 2022 and 2023. As illustrated, LIPA's power supply costs as a percentage of sales revenues were 55 percent in 2022 and 48 percent in 2023.

Table 5-3: Net Revenue Margins and Unaccounted for Energy

($000)

	2022	2023
Net Revenue Margins		
Sales Revenues	4,279,158	3,698,833
Power Supply	(2,369,547)	(1,759,470)
Net Revenue Margin	1,909,611	1,939,363
Power Supply to Sales Ratio	55%	48%
Unaccounted for Energy (MWh)		
Power Supply	19,884,053	19,124,016
Energy Sales	18,742,502	18,007,152
Unaccounted for Energy Losses	1,141,551	1,116,864
Percentage	5.74%	5.84%

Table 5-3 also illustrates the ratio of the amount of energy purchased and delivered to the electric system to total energy sales. This relationship identifies the level of unaccounted for energy in the system. This unaccounted for energy is primarily attributable to transmission and local system line and transformer losses, and to a much lesser extent may include unmetered or inaccurately metered sales, or even theft, etc. The bottom portion of Table 5-3 presents these comparisons for LIPA for 2022 and 2023. As shown, the percentage ratio of the unaccounted for energy to the total energy purchased was 5.74 percent for 2022 and 5.84 percent for 2023.

Table 5-4 presents a re-creation of LIPA's Statement of Revenues, Expenses, and Changes in Net Assets for 2022 and 2023. As illustrated, the Excess of Revenues Over Expenses generated by LIPA were $95.0 million and $130.1 million in 2022 and 2023, respectively.

Table 5-4: Statement of Revenues, Expenses, and Changes in Net Assets

($000)

	Actual	
	2022	2023
Electric Revenues	4,279,158	3,698,833
Operating Expenses		
Operations - Power Supply Charge	2,160,832	1,651,509
Operations - Power Supply Charge - Property Tax Related	208,715	107,961
Operations and Maintenance	719,626	717,230
Storm Restoration	32,520	23,033
General and Administrative	40,058	50,739
Depreciation and Amortization	422,797	448,054
Payments In-Lieu of Taxes and Assessments	360,045	352,828
Total Operating Expenses	3,944,593	3,351,354
Operating Income	334,565	347,479
Other Income and Deductions, Net	103,468	146,003
Excess of Revenues Over Expenses Before Interest Expense	438,033	493,482
Interest Expense		
Debt Service Interest Expense	375,466	409,612
Other Interest Expense and Fees	27,875	22,206
Subtotal Interest Expense	403,341	431,818
Other Interest Amortizations	(60,261)	(68,425)
Net Interest Expense	343,080	363,393
Excess of Revenues Over Expenses	94,953	130,089

5.2.2 Adequacy of Electric Rates

In order to determine if LIPA meets this requirement on an annual basis, LIPA performs a Rate Covenant calculation to measure if rates are set at a level to meet operating cash needs plus debt service requirements. As shown in Table 5-5, LIPA's coverage indicates that its rates are set at levels adequate to meet its annual debt obligations. As Table 5-5 illustrates, LIPA generated sufficient cash from operations to satisfy its Rate Covenant, as it exceeded the required 100 percent coverage requirement. Therefore, the revenues generated by the current electric rates have been sufficient to meet the applicable covenants of the General Resolution. Beginning in 2016, LIPA moved from a net income revenue requirement to a fixed obligation coverage revenue requirement. The target on LIPA's issued debt and capitalized leases was 1.40x for both 2022 and 2023. When UDSA's restructuring bonds are included, the coverage ratio

target was set at a minimum of 1.20x. This change was designed to help improve the debt ratings from Standard and Poor's, Moody's Investors Service, and Fitch Ratings. The Authority has received four credit rating upgrades in aggregate across all three rating agencies since 2013, achieving Moody's, Standard & Poor's, and Fitch[14] bond ratings of A2, A, and A, respectively as of December 31st, 2023.

Table 5-5: Rate Covenant Calculation

($000)

Cash Flows	2022	2023
Net Cash Provided by Operating Activities	$ 1,345,676	$1,164,471
Interest Income	8,979	54,156
Grant Proceeds	303,238	71,691
Cash receipts from Interest rate Swaps	6,220	24,499
Revenues per the Resolution	$ 1,664,113	$1,314,817
Cash Provided by Operating Activities - UDSA	(371,098)	(402,283)
Available for Coverage	$ 1,293,015	$ 912,534
Senior Lien Debt	$ 212,124	$ 204,791
Coverage on LIPA Senior Lien Debt Service (x)	6.10	4.46
Senior Lien and Subordinated Debt	$ 212,124	$ 204,791
Coverage on Senior Lien and Subordinated Debt (x)	6.10	4.46
Total Debt Service	$ 212,124	$ 204,791
Coverage on Total Debt (x)	6.10	4.46

5.3 Status of Revenue Bonds

At the end of 2023, LIPA had general revenue bonds, general revenue notes, general revenue commercial paper and restructuring bonds. Table 5-6 displays these outstanding debts during the Study Period. During 2022, debt decreased by $230.1 million compared to 2021. During 2023, debt increased by $322.0 million compared to 2022.

[14] Fitch has issued a further upgrade to an A+ rating in July of 2024

Table 5-6: Outstanding Debt, Balance as of December 31

($000)

Outstanding Debt	2021	2022	2023
General Revenue Bonds/ Notes	4,996,159	4,958,221	5,212,111
UDSA Restructuring Bonds	3,703,356	3,802,210	3,656,345
General Revenue Notes	2,000	-	-
General Revenue Commercial Paper Notes	420,000	131,000	345,000
Subordinate Commercial Paper Notes	-	-	-
Total Outstanding Debt	9,121,515	8,891,431	9,213,456

Note: Net premiums and current maturities are excluded from the total outstanding debt.

Table 5-7 illustrates the debt service schedule for the outstanding bonds and notes for both LIPA and UDSA as of December 31, 2023. The principal, interest, and the annual total are shown. As of December 31, 2023, LIPA had a total of $8.91 billion of outstanding debt principal and a total obligation of $13.16 billion.

Table 5-7: Debt Service Schedule

(Including UDSA)
($000)

Due	Principal [1]	Interest	Net Swap Payments	Total
2024	286,875	385,828	2,373	675,076
2025	598,225	370,988	2,426	971,639
2026	405,715	353,744	2,431	761,890
2027	417,260	336,760	2,446	756,466
2028	435,310	318,544	38	753,892
2029-2033	2,423,090	1,272,224	(22,653)	3,672,661
2034-2038	1,898,365	753,482	(21,182)	2,630,665
2039-2043	1,351,965	331,138	(5,782)	1,677,321
2044-2048	746,735	130,092	-	876,827
2049-2053	351,180	31,109	-	382,289
	8,914,720	4,283,909	(39,903)	13,158,726

[1] Future interest on capital appreciation bonds is included in principal maturities.

5.4 FEMA Grants

LIPA is eligible to receive Public Assistance ("PA") and Mitigation grants through FEMA following major disaster declarations. PA grants reimburse costs associated with emergency protective measures and the repair and restoration of damaged facilities. Mitigation grants provide funding to harden the system against the future impact of severe weather events. Disaster assistance is subject to eligibility rules applicable to the applicant, facility, work, and cost.

5.4.1 Superstorm Sandy

In 2012, Superstorm Sandy caused significant damage to LIPA's Service Area resulting in the declaration of a federal major disaster area and making LIPA eligible for FEMA grants. In 2013, LIPA and FEMA signed a Letter of Undertaking ("LOU") that provides for a PA grant authorized under Section 428 of the Stafford Act (428 Grant Agreement) for $1.434 billion. As of December 31, 2023, LIPA has received FEMA funding reimbursing Superstorm Sandy costs of approximately $1.157 billion with a remaining balance due from FEMA of approximately $126 million. LIPA continues to provide FEMA supporting documentation to enable the funding of the remaining balance. LIPA anticipates being under budget by approximately $50 million and has begun the process of communicating with FEMA on additional hardening efforts to utilize the underrun.

5.4.2 Tropical Storm Isaias

On August 4, 2020, LIPA's Service Area suffered significant damage as a result of Tropical Storm Isaias. The resulting damage to the electrical system caused significant customer outages. Tropical Storm Isaias was declared a federal major disaster on October 2, 2020. LIPA filed for recovery of response and storm restoration costs of approximately $309 million associated with Tropical Storm Isaias. During 2022, LIPA received FEMA funds totaling approximately $276 million. LIPA is seeking to obtain mitigation grants under the Tropical Storm Isaias declaration.

5.4.3 Tropical Depression Ida

In September 2021, portions of LIPA's service territory were impacted by Tropical Depression Ida, which resulted in severe flooding in parts of the Service Area leaving downed trees and power lines. LIPA incurred costs of approximately $9 million to restore power and repair system damage. This event was declared a federal disaster and as such LIPA filed for a public assistance grant totaling with a 90 percent match from FEMA. As of December 31, 2023, LIPA received approximately $8 million.

5.4.4 Winter Storm Elliott

On March 15, 2023, FEMA declared a federal disaster for a December 2022 winter storm that impacted LIPA's Suffolk County service territory. LIPA incurred costs of approximately $4 million in that county restoring power and repairing the system damages. LIPA has been approved for public assistance grant with a 75 percent match from FEMA, however, as no grant application has been finalized or approved prior to December 31, 2023, no grant income was recognized.[15]

[15] Basic Financial Statements and Required Supplementary Information, KPMG, December 31, 2023 and 2022, p. 43.

6.0 CONCLUSIONS

In the preparation of this Report, Burns & McDonnell completed assessments of the electric generating stations and the transmission and distribution system of the Authority. The investigations included interviews, observations, and reviews of 2022 through 2023 expenditures and 2024 budget. In addition, a review of the adequacy of the revenues generated by the current electric rates in relation to the requirements of the bond covenants was completed.

Based on statements and information provided to Burns & McDonnell by the Authority, as well as the observations and reviews performed, Burns & McDonnell offers the following observations and conclusions:

1. The Authority and PSEG-LI have provided services adequate for operation, maintenance, and repair of the system during the Study Period, January 1, 2022 to December 31, 2023.

2. The Authority's electric transmission and distribution system and the associated facilities, including the Nine Mile Point 2 Generating Station, partially owned by the Authority, have been operated and maintained consistent with accepted industry practices in the United States over the last two years. The Authority is evaluating opportunities to improve its system in certain areas, such as the OMS.

3. For the Forecast Period, it is reasonable to expect the Authority and PSEG-LI (and the future service provider) will continue to provide services adequate for operation, maintenance, and repair of the system consistent with that experienced during the Study Period.

4. The Authority continues to be one of the most reliable overhead electric utilities in New York State based on the System Average Interruption Duration Index ("SAIDI"), System Average Interruption Frequency Index ("SAIFI"), and Customer Average Interruption Duration Index ("CAIDI") measurements provided to Burns & McDonnell.

5. LIPA continues to invest in its facilities including storm-hardening program efforts. These investments provide improved system resiliency. Burns & McDonnell observed some of the system upgrades and improvements made throughout the Study Period during the site inspections.

6. Revenues for the Study Period are sufficient to cover operation, maintenance, and repair expenses for the system during the Forecast Period. The electric revenues generated by the current electric

rates are sufficient to fulfill the debt service coverage requirement defined in the covenants of the Resolutions.

7. The Authority is complying with the provisions of the Resolutions, each as amended by subsequent resolutions.

8. As of the date of this Biennial Report, the system is in good repair and sound operating condition to reliably deliver capacity and energy to the Authority's customers.

BURNS McDONNELL

CREATE AMAZING.

Burns & McDonnell World Headquarters
9400 Ward Parkway
Kansas City, MO 64114
O 816-333-9400
F 816-333-3690
www.burnsmcd.com