



Clean, Reliable, Customer-First

2022 Proposed Budget

2022 Proposed Budget

\$3,911,897,000

operating

\$759,871,000

capital

Energy Requirements

20,104,072

megawatt hours

Transmission System

1,400

miles

2021 Peak Demand

5,217

megawatts

Distribution System

9,000

miles overhead

5,000

miles underground

189,000

transformers

Substations

30

transmission

152

distribution

Generating Capacity

5,757

megawatts

Customers

1,023,221

residential

116,560

commercial

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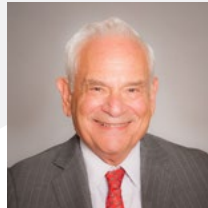


Board of Trustees



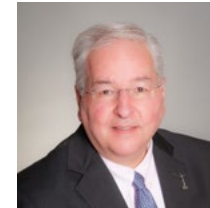
Mark Fischl

- Vice Chair
- Chair, Oversight and Clean Energy Committee
- Finance and Audit Committee



Elkan Abramowitz

- Chair, Governance Planning, and Personnel Committee
- Finance and Audit Committee



Drew Biondo

- Governance, Planning, and Personnel Committee



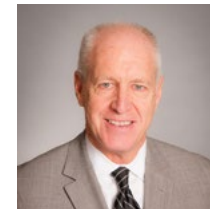
Valerie Anderson Campbell

- Governance, Planning, and Personnel Committee



Reverend Alfred L. Cockfield

- Oversight and Clean Energy Committee



Sheldon L. Cohen

- Chair, Finance and Audit Committee
- Governance, Planning, and Personnel Committee



Nancy S. Goroff, Ph.D.

- Oversight and Clean Energy Committee



Lauren Harris

- Finance and Audit Committee



Ali Mohammed

- Oversight and Clean Energy Committee

Governance Model

The Long Island Power Authority is governed by a local Board of Trustees. The Board supervises, regulates, and sets policy for LIPA. The Board consists of nine Trustees, five of whom are appointed by the Governor, two by the Temporary President of the State Senate, and two by the Speaker of the State Assembly.

The Trustees serve staggered four-year terms. The LIPA Reform Act of 2013 requires that all Trustees reside on Long Island or in the Rockaways and have relevant utility, corporate board, or financial experience. Trustees are not compensated for their service.

Strategic Direction by the Board

In 2021, the Board of Trustees reviewed and refreshed LIPA's purpose and vision, as well as its expectations for the strategic outcomes that management will deliver in the areas of reliability, customer experience, and information technology. The Board also reviewed key priorities in other areas, such as clean energy and customer affordability. Figure 1 summarizes some of the Board's expectations for the service LIPA provides to customers.

Figure 1

Summary of LIPA Board's Key Objectives

Reliability and Resiliency

- **Top 10% reliability** among peer utilities
- **Improve circuit conditions** that cause some customers to have repeated outages
- Invest in system resiliency to **reduce outages and restoration times** from severe weather
- Independently verify and validate **emergency restoration planning**

Customer Experience

- Deliver **top quartile customer satisfaction** in J.D. Power survey
- Continually improve in **ease of customer interaction**, as measured by customer surveys
- **Invest in technology to enhance convenience** of billing, payments, appointments, emergency restoration, etc.

IT and Cybersecurity

- Deploy **modern grid management technology and data analytics** benchmarked to the top 25% of utilities
- **Protect digital infrastructure and customer data**, as measure by the NIST Cybersecurity Framework
- Clearly communicate customer information and data collection policies

Clean Energy

- **70 percent renewable energy** by 2030
- **Zero-carbon electric grid** by 2040
- **Promote beneficial electrification** of transportation and buildings (i.e., EVs and cold-climate heat pumps)

Customer Affordability

- Electric rates at the **lowest fiscally and operationally sound levels**
- Electric rates **comparable to regional utilities**
- Electric rate increases that are **in line with the rate of inflation**
- Electric rate designs **consistent with New York statewide principles**

Purpose Statement

LIPA's purpose is to **serve our customers and community** by providing clean, reliable, and affordable energy to Long Island and the Rockaways. As a **not-for-profit utility**, LIPA is a value-driven organization that puts our **customers first** in all our actions.

Vision

LIPA's vision is to be our **customers' trusted energy partner**. To achieve our vision, LIPA will:

- Actively **engage** with our customers and the communities we serve;
- **Respond** to our customers' needs and exceed their expectations;
- Be a recognized **innovator** in our industry to better serve our customers; and
- Be known as a **steward** of our environment and community.

For more information about the Board's Policies, please visit lipower.org/purpose.

Executive Management Team



Thomas Falcone

Chief Executive Officer



Anna Chacko

General Counsel



Mujib Lodhi

Chief Information Officer
and Senior Vice President of
Customer Experience



Tamela Monroe

Chief Financial Officer



Bobbi O'Connor

Chief Administrative Officer;
Secretary to the Board of
Trustees



Billy Raley

Senior Vice President,
Transmission and Distribution
System Oversight



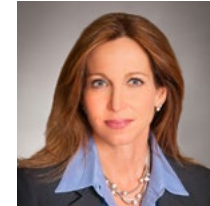
Rick Shansky, P.E.

Senior Vice President, Power
Supply and Wholesale Markets



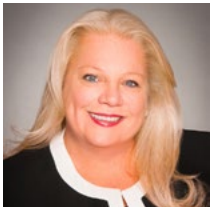
Justin Bell

Vice President, Public Policy and
Regulatory Affairs



Donna Mongiardo, CPA

Vice President, Controller



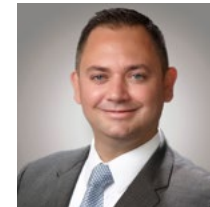
**Barbara Ann Dillon,
Esq., PHR**

Director of Human Resources
and Administration



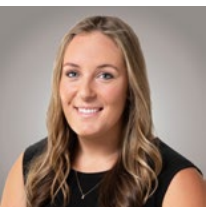
Kenneth Kane, CPA

Senior Advisor for Oversight



Tom Locascio

Director of External Affairs



Jennifer Hayen

Director of Communications

Section One | Budget Message





Budget Message | Letter From Our CEO

Dear Customer-Owners and Stakeholders,

A budget is less a series of numbers than an expression of values. LIPA's annual budget provides an opportunity to take stock of where we stand as an organization, inform our customer-owners of the progress we have made, and convey our plans to deliver a **customer-first** electric utility for Long Island and the Rockaways.

Three topics in particular warrant discussion – LIPA's reformed contract with PSEG Long Island, our efforts to make the electric grid more resilient, and our plans to meet New York's nation-leading carbon reduction goals.

This budget reflects the Board's priorities and is focused on delivering exceptional results for our customers, including:

- An **outstanding customer experience** among the top 25 percent of electric utilities;
- A **highly reliable electric grid** among the top 10 percent of peer electric utilities – equivalent to fewer than one power outage a year per customer or 99.99 percent reliability;
- Advancing **New York's climate goals**, including 70 percent renewable energy by 2030 and a carbon-free electric grid by 2040; and
- **Electric service at the lowest possible cost**, with rates that are comparable to or below our neighboring utilities in the New York metropolitan area.

Reformed Contract with PSEG Long Island

Over the past 15 months, LIPA has completed an exhaustive investigation of PSEG Long Island's failed response to Tropical Storm Isaias, including publishing six reports of our findings. The Department of Public Service (DPS) also completed their separate, independent inquiry.

The results were both disappointing and unflattering. The root cause of PSEG Long Island's storm response failures were management problems. Further, PSEG Long Island management was not candid with LIPA and DPS about what it knew before, during, and after the storm. The truth was uncovered in the emails and text messages of PSEG Long Island staff, as documented in our reports.

The LIPA Board has adopted 167 specific recommendations for PSEG Long Island to implement to improve management, emergency management, and information technology, among other areas. The Board has asked LIPA management to independently verify and validate the remediation of each of these recommendations and to report to the Board on the status in Quarterly Reports. However, the Board took the position that even remediating known problems was insufficient. As LIPA pays for management services, and the root cause of the poor storm response was PSEG Long Island management shortcomings, **the Board, with the support of the DPS, voted in November 2020 to either terminate or renegotiate LIPA's management contract with PSEG Long Island.**

At the Board's request, LIPA staff reviewed all the options available for the future management of LIPA's assets, including a renegotiated contract with PSEG Long Island, hiring a new service provider, and LIPA directly taking over management responsibilities. In its Options Analysis dated April 2021, LIPA highlighted the advantages of each alternative and stated the eight non-negotiable reforms that would be required to enter into a reformed agreement with PSEG Long Island, shown in Figure 2.

Figure 2

Eight Core Contract Reforms Required for a New Contract with PSEG Long Island

Strengthen Incentives and Accountability Mechanisms

- 1** Greater share of management compensation at risk based on performance
- 2** Expanded performance metrics with greater rigor covering all categories of the management services provided to LIPA
- 3** Strong gating and default metrics to discourage singularly poor performance (e.g., storms)
- 4** Strengthen Long Island-based management and accountability for Long Island operations
- 5** Require candor from service provider



Strengthen Oversight

- 6** Require compliance with Board recommendations to address known deficiencies
- 7** Strengthen oversight in long-term planning, project prioritization, and budget development
- 8** Partition Long Island IT systems and facilitate independent verification and validation by LIPA



On November 9, 2021, LIPA and PSEG Long Island reached agreement on a reformed contract. **The new contract fundamentally addresses LIPA's concerns.** As the Board insisted on, a “second chance” for PSEG Long Island cannot be an act of faith. It must be backed by contractually binding commitments adequate to the task.

Among the eight reforms LIPA has secured in the reformed contract are a commitment to a **fully staffed, capable local management team, strict “pay for performance” measures that directly affect the majority of PSEG Long Island’s compensation, and strengthened contract termination rights.** Additionally, the contract provides **new oversight rights to both LIPA and DPS**, including the right to independently verify and validate the stress testing of all mission-critical computer systems. Thirdly, the contract requires a **Duty of Candor from PSEG Long Island**, violation of which can result in termination. Most significantly, **the management agreement has been effectively shortened from 12 years to four** by eliminating PSEG Long Island’s option to extend the contract upon its expiration in 2025.

In addition to the strong contract terms, **LIPA has put in place 96 rigorous performance standards for 2022 that will determine PSEG Long Island’s compensation.** Among these measures are the material unfinished work contained in the Board’s 167 recommendations. A summary of these performance standards is included in Section III, and the complete details are available on LIPA’s website.

At the end of 2022, LIPA’s review of PSEG Long Island’s performance on these measures will be publicly available. Under the LIPA Reform Act, LIPA must first evaluate PSEG Long Island’s performance, and then DPS must independently review and approve LIPA’s evaluation.

I am aware of no utility in the country that has a more transparent and public set of measures for management accountability. PSEG Long Island management will either meet these rigorous measures, or their shortcomings will be obvious, and PSEG Long Island will have strong incentives to remediate the causes.

After 15 months of investigations, six public reports, and an exhaustive inquiry, the **new contract terms are entirely beneficial to LIPA and its customers**. Additionally, the settlement agreement provides \$30 million of benefits to LIPA customers and avoids the costs, delays, and uncertainty of further litigation.

Figure 3 summarizes the key changes between the 2013 PSEG Long Island contract and the reformed contract for 2022.

Figure 3

Key Benefits of the Reformed PSEG Long Island Contract

	Original 2013 LIPA-PSEG Long Island Contract	REFORMED 2022 LIPA-PSEG Long Island Contract	Description
Objective 1: Greater Share of PSEG Long Island Compensation at Risk Based on Performance			
How much of PSEG Long Island's compensation is at risk based on performance?	\$10 million (13% of contract fees)	\$40 million (51% of contract fees)	The reformed management contract increases the amount of PSEG Long Island's annual compensation at risk from \$10 million to \$40 million.
Objective 2: Expanded Performance Metrics with Greater Rigor Covering all Categories of Management Services			
How are Performance Metrics set?	Initially in 2013; any changes are with PSEG Long Island's agreement	Annually, by LIPA Board and DPS	Under the existing contract, PSEG Long Island is effectively able to set its own standards of performance by declining to update metrics for evolving industry trends and customer needs. Now, Performance Metrics will be set by LIPA and DPS and voted on by the LIPA Board in a public meeting at the beginning of each year.
How many Performance Metrics affect compensation?	20-26	Up to 110	PSEG Long Island will be subject to detailed performance requirements set annually by the LIPA Board and DPS to ensure the company meets industry best practices across all the management services provided to LIPA and its customers.

	Original 2013 LIPA-PSEG Long Island Contract	REFORMED 2022 LIPA-PSEG Long Island Contract	Description
Objective 3: Strong Gating and Default Metrics to Address Failure to Achieve Minimum Performance			
<ul style="list-style-type: none"> Cost Management: spending more than 102% of LIPA budgeted funds 	\$5-10 million	\$10-20 million	PSEG Long Island's compensation pool is automatically reduced if PSEG Long Island does not stay within budget or fails to meet minimum levels of performance in four core customer-facing categories. A new gating metric has been added for emergency preparation and response. A new default metric has been added for cybersecurity.
<ul style="list-style-type: none"> Emergency Preparedness and Response: failure to achieve minimum performance score on a 48-hour or 72+ hour storm 	Right to terminate after two failures on 72+ hour storms in three consecutive years	\$5 million (48-hour) to \$10 million (72+ hour) and right to terminate (72+ hour only) on a single failure	
<ul style="list-style-type: none"> Reliability: average customer minutes without power exceeds utility benchmark 	\$13.4 million for 2 failures in 3 consecutive years (>95 Minutes)	\$10 million for failure in any contract year (>85 minutes)	
<ul style="list-style-type: none"> Customer Satisfaction: failure to meet minimum customer satisfaction performance 	\$13.4 million for 2 failures in 3 consecutive years on a combination of JD Power and internal customer contact surveys (unlikely to occur); right to terminate after 4 consecutive annual scores in 4th quartile	\$3 million and right to terminate for 2 consecutive annual scores in 4th quartile of JD Power Customer Satisfaction Survey beginning in 2024	
Violations of emergency response plan or failure to provide safe, adequate, and reliable service to customers	n/a	Up to \$20 million	The reformed contract includes a new DPS investigative process with compensation reductions for violations of PSEG Long Island's emergency response plan or failures to provide safe, adequate, and reliable service to customers.
Cybersecurity: failure to implement measures to achieve NIST Cybersecurity Framework Tier 3	n/a	Right to terminate	The reformed contract has a termination right for failed cybersecurity performance.

	Original 2013 LIPA-PSEG Long Island Contract	REFORMED 2022 LIPA-PSEG Long Island Contract	Description
Contract Term			
When does the contract end?	PSEG Long Island has the right to extend the contract for eight years on substantially similar terms to 12/31/2033	12/31/2025	The reformed contract eliminates PSEG Long Island's option to extend the contract on substantially similar terms for eight years, effectively shortening the termination date to December 31, 2025. Any renewal of the contract will be based on demonstrated performance.
Objective 4: Strengthen Long Island-Based Management and Accountability for Long Island Operations			
Does PSEG Long Island have a fully staffed local management team?	34 PSEG Long Island employees report to superiors in New Jersey	Fully staffed Long Island executive team with decision-making authority. All Long Island employees report to a local manager. Five new local executive positions to be added	The President and Chief Operating Officer of PSEG Long Island will have full and final operational decision-making authority. All Long Island employees will report to a local manager. Local senior executives will be added to strengthen information technology, cybersecurity, emergency response, business services, and human resources.
Does the contract require transparency by PSEG Long Island around decisions to hire PSEG affiliates to provide services to LIPA?	No	Yes	The reformed contract requires a demonstration of cost savings or improved service for hiring or retaining a PSEG affiliate to perform services for LIPA. LIPA has the right to reject affiliate services that do not meet this standard.
Objective 5: Duty of Candor			
Does the contract require timely and accurate disclosure of significant operational issues?	No	Yes	The reformed contract requires timely, affirmative disclosure to LIPA and DPS of issues that significantly impair PSEG Long Island's ability to provide reliable service, emergency response, cybersecurity, financial impairment, noncompliance with laws, or circumstances that may endanger public health, safety, and welfare.
Can LIPA terminate for Violation of the Duty of Candor?	No	Yes	LIPA may terminate the contract if the PSEG Long Island violates the Duty of Candor.

	Original 2013 LIPA-PSEG Long Island Contract	REFORMED 2022 LIPA-PSEG Long Island Contract	Description
Objective 6: Require Compliance with LIPA Board Recommendations to Address Known Deficiencies			
Does the contract require PSEG Long Island to fix operational issues identified by LIPA or DPS in a timely manner?	No	Yes	The reformed contract requires PSEG Long Island to implement plans to fix known operational issues identified by LIPA management or DPS, with oversight by the LIPA Board, pursuant to agreed upon plans.
Objective 7: Long-term Planning, Budget Development, and Cost Management			
Are management objectives, budgets, and performance metrics tied together to deliver value for LIPA customers?	Limited to Utility 2.0 Plans (energy efficiency and electrification programs); limited recourse for failure to deliver approved plans	Each scope of management services has a long-term plan approved by the LIPA Board. Budget proposals and performance metrics are aligned with delivering on long-term plans	The reformed contract requires 5-year plans for each scope of management services provided by PSEG Long Island management. Budgets and performance metrics are tied to delivering on the objectives of these plans, providing greater transparency and accountability for delivering projects and services on time and within budget.
Objective 8: Partition Long Island IT Systems and Facilitate Independent Validation and Verification			
Can LIPA independently stress test and validate the performance of mission-critical information technology systems?	No	Yes	The reformed contract has new rights to allow LIPA to independently stress test and validate the performance of mission-critical information technology systems, such as those that failed during Tropical Storm Isaias.
Are LIPA IT systems entangled with PSEG Long Island's parent company system?	Partially merged with PSEG Long Island's parent company systems, with limited LIPA oversight	Separate, independently testable, LIPA-owned IT systems	The reformed contract requires PSEG Long Island to separate information technology platforms from New Jersey-based systems to ensure better accountability and oversight and to reduce barriers to switching to a new provider in the future, if necessary.

LIPA has made the proposed contract available on our [website](#) for a 30-day public review period. LIPA will accept public comment on the reformed contract at the November 17 and December 15, 2021 Board meetings, as well as at an evening public comment session scheduled for December 2, 2021. If the Board approves the contract, it will also be subject to review and approval by both the Attorney General and the State Comptroller prior to taking effect.

Performance Standards for 2022

The reformed contract between LIPA and PSEG Long Island includes \$40 million of at-risk compensation, or 51% of the total management fees paid each year by LIPA, including:

- **\$20 million of Variable Compensation** at-risk based on performance standards set by LIPA, with an independent recommendation to the LIPA Board by the DPS. These performance standards ensure that PSEG Long Island's compensation is tied to delivering meaningful results for Long Island and Rockaways electric customers.
- **\$20 million of DPS Compensation** at-risk if PSEG Long Island violates its Emergency Response Plan or fails to provide safe and adequate service, as determined by an independent DPS investigation and recommended to the LIPA Board.

For 2022, LIPA and PSEG Long Island have agreed to 96 performance standards, distributed across all the management services provided to LIPA and its customers. These metrics, which will be reset annually by LIPA and DPS, are designed to be achievable levels of improvement (or to maintain already high levels of service) that are objectively verifiable. The funds to achieve this performance are also budgeted, tying realistic plans and budgets to achievable, measurable outcomes each year.

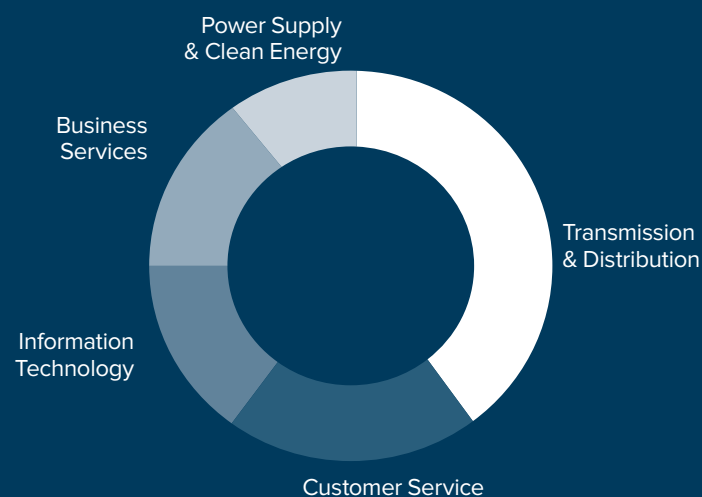
Figure 4 summarizes the performance standards by focus area and contract function.

Figure 4

Focus Areas for 2022 Performance Standards



2022 Performance Standards by Function



Some highlights among the 96 performance standards for 2022 include:

Major Projects	<ul style="list-style-type: none"> • Asset Management Program: Plan and implement a new asset management program consistent with ISO-55001, including developing effective asset management plans, surveying assets, and deploying a new Enterprise Asset Management System to track assets, work, maintenance, and inventory levels, to enable preventative and predictive maintenance that increases reliability and reduces cost to customers. • Primary Transmission Control Center Replacement: Complete strategic and conceptual design of a new control center to manage the electric flows on the Long Island electric grid. • Customer Information System (CIS): Plan for and deploy a new, flexible, modern CIS capable of effective and efficient customer transactions, billing and customer services.
Reliability	<ul style="list-style-type: none"> • Reliability Performance: Maintain average reliability among the top 10% of utilities; reduce the number of customers with four or more outages by 22%; reduce customers with “flicker” outages by 13%; and reduce customers with six or more “flicker” outages by 20%.
Resiliency	<ul style="list-style-type: none"> • Resiliency: Meet milestones for storm hardening program, while developing pilots and plans to underground rear-yard branch circuits, harden transmission feeds to load pockets, and operationalize smart switches. • Tree Trimming: Utilize data to target vegetation management plans to improve effectiveness, implement a new “trim to sky” protocol, and increase removal of “hazard” trees from 3,000 to 12,000 per year.
Customer Satisfaction	<ul style="list-style-type: none"> • Customer Experience Projects: Deliver seven projects to improve the customer contact and billing experience, including smart meter features, upgrading credit card vendors, enhancing the mobile app, and enhanced texting of outage information. • Call Center: Answer 80% of calls with a live agent within 30 seconds and resolve at least 80% of calls on the first call. • Email Resolution: Answer 70% of emails within 24 hours. • Social Media: Respond to 90% of social media inquiries related to health and safety with a live agent within 2 hours on blue sky days and 80% within 3 hours during storms. • Low Income Discounts: Increase participation in the low-income discount program by 34% compared to the 3-year average.

Clean Energy	<ul style="list-style-type: none"> • Integrated Resource Plan: Complete LIPA IRP per agreed upon scope. • Energy Storage RFP: Complete studies to award contracts for 180 MW of battery storage. • Energy Efficiency and Beneficial Electrification: Achieve targets contained in annual Utility 2.0 filing. • EV Make Ready: Achieve targets in annual Utility 2.0 filing for deploying EV chargers. • DER Interconnection: Improve the interconnection process for solar systems per LIPA Board recommendations. • Time of Use Rates (TOU): Implement new TOU rates for space heating and large commercial customers; enroll 12,000 new customers in optional TOU pricing plans.
Operations	<ul style="list-style-type: none"> • Work Management: Implement new practices for short and long-term scheduling and tracking of work to optimize staffing levels, increase productivity, and reduce overtime. • Construction: Implement a minimum of 85% of capital projects on time and within the estimated cost. • Safety: Maintain the incidents rate for employee injuries among the top 25% of utilities while reducing serious injuries resulting in days away by 22%. • Contractor Performance: Implement a new contractor evaluation system to benefit from suppliers that have demonstrated experience in cost controls, performance, quality, risk management, innovation, and transformation. • Estimated Times of Restoration: Improve the accuracy of restoration time estimates provided to customers in blue sky conditions by 10%.
Information Technology	<ul style="list-style-type: none"> • IT Organizational Maturity: Improve the organization's ability to manage and implement IT projects to Level 3 as measured by the Capability Maturity Model Integration (CMMI) model. • Disaster Recovery: Complete a robust IT resiliency plan that includes thoroughly exercised disaster recovery and business continuity plans for all critical systems/processes. • Lifecycle Management: Upgrade IT assets to be within their active service life and under general support by the product vendor. • IT System Implementation: Implement 21 major IT system projects. • IT Board Recommendations: Implement 9 major IT projects related to recommendations adopted by the LIPA Board, including the Outage Management System. • IT System Segregation: Plan for and separate LIPA IT systems from PSEG New Jersey systems.

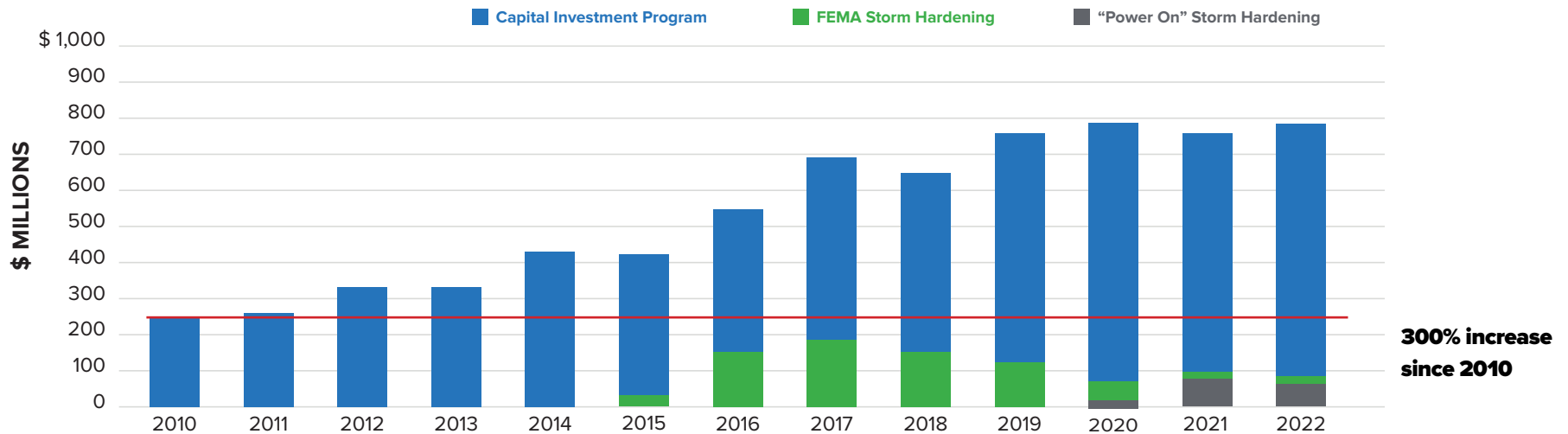
For a more detailed summary of the performance standards for 2022, please see Section III. The complete details of the 2022 performance standards are available on LIPA's website.

Making the Electric Grid More Resilient

Severe weather and other extreme events can disrupt the operations of the electric grid, causing multi-day power outages for customers. **LIPA has invested a record \$4.9 billion in infrastructure since 2016 to improve the reliability and resiliency of Long Island's electric grid – over 3 times the level of investment of a decade ago** (see Figure 5). This investment has led to significantly improved outcomes (Figure 6). LIPA's investments will continue to improve every day reliability and to **enhance grid resiliency, reducing the impact of a large storm event**.

Figure 5

Capital Investments in the Long Island Electric Grid are Up 300%



The LIPA Board of Trustees recently completed a strategic review of its objectives for reliability and resiliency for the Long Island and Rockaways electric grid. Based on that strategic review, **the Board has set its objectives for reliability and resiliency**, including:

- **Reliability:** Maintain **top 10 percent reliability** among peer utilities, while improving circuit conditions that cause any customers to experience significantly worse reliability than the average customer; and
- **Resiliency:** Mitigate the effects of climate change through **multi-year programs that reduce the number and duration of outages after significant system disruptions**.

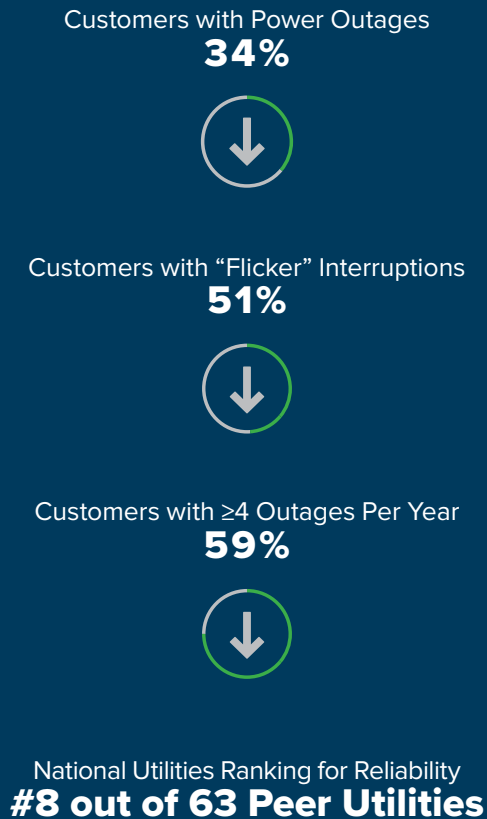
Following Tropical Storm Isaias, the Board adopted several recommendations to put these objectives into effect, the results of which have been incorporated into the 2022 budget and PSEG Long Island performance standards. The overall strategy, however, is illustrated in Figure 7, which represents **a customer-driven approach to grid resiliency**.

The blue line in Figure 7 shows the “outage curve” (i.e., the number of customers out per day) for Tropical Storm Isaias or a similar storm affecting approximately half of all customers. The black line shows LIPA’s objectives for a similar storm as a result of our resiliency investments over the next five years.



Figure 6

Reliability and Resiliency Investments
Showing Results for Customers



LIPA’s efforts are to both limit the number of customers impacted by an outage event and shorten the length of restoration for those that are impacted. Initiatives for 2022 include:

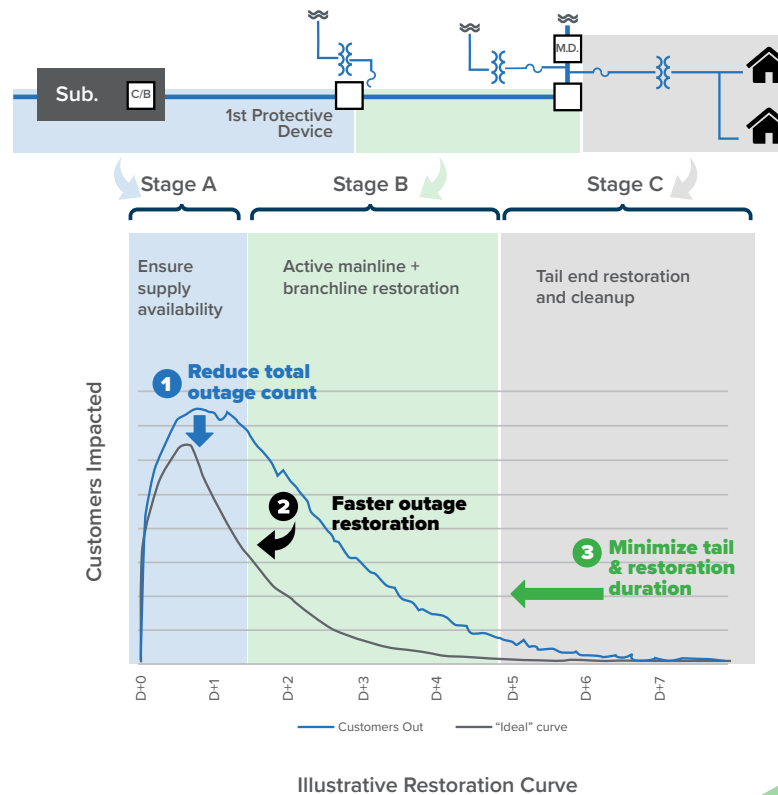
Reduce the number of outages by:

- Continuing to harden the worst performing distribution circuits
- Hardening one transmission supply feed to every substation in a load pocket
- Reducing the number of customers behind each smart switch to less than 500
- Increasing hazard tree removal, implementing a trim-to-sky protocol, and deploying intelligence to the tree trim cycle

Shorten the length of storm restoration by:

- Utilizing smart meter data for operational intelligence
- A pilot program for selective undergrounding of hard to access rear-lot distribution service
- Deploying electricians for low-voltage restoration

Results of these new initiatives in 2022 will refine plans for 2023 and beyond.



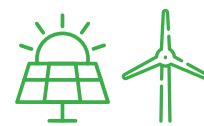
Clean Energy Transition

LIPA is transitioning the electric grid for Long Island and the Rockaways away from fossil fuels. This is in step with New York's Climate Leadership and Community Protection Act (CLCPA), which requires an **entirely carbon-free electric grid by 2040**, among the other goals in Figure 8.

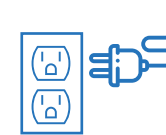
Transitioning to a carbon-free electric grid involves both adding new clean sources of energy and retiring older, fossil-fueled power plants. **The transition to clean energy will involve billions of new investment that will create jobs and improve Long Island's environment.**

Figure 8

New York's Climate Goals



Renewables
70% by 2030
Electric Sector
GHG Reduction
100% by 2040



Energy Efficiency
185 trillion BTU reduction by 2025



Offshore Wind
9,000 MW by 2035



Battery Storage
3,000 MW by 2030



Solar Energy
6,000 MW by 2025
10,000 MW by 2030



Electric Vehicles
100% zero-emission vehicles by 2035



Figure 9 shows already committed clean energy projects for the Long Island electric grid through 2030. Long Island will have about 900 megawatts (MW) of solar generation in service by 2022, 2,300 MW of offshore wind by 2026, and 400 MW of energy storage by 2030. **Already committed actions will add 3,500 MW of clean energy to the Long Island electric grid – that’s on a grid with a 2021 peak demand of 5,217 MW.**

Figure 9

Long Island Clean Energy Projects in Service and under Procurement

	Size (MW)	In-service (Est.)
Solar (900 MW)		
Long Island Solar Farm	32	2011
Eastern Long Island Solar Project	11	2013
Shoreham Solar Commons	25	2018
Riverhead Solar	20	2019
Kings Park Solar 1 and 2	4	2019
Feed-In Tariffs (FIT I- FIT III)	89.5	2012-2021
LI Solar Calverton	23	2021
Riverhead Solar II	36	2022
Rooftop Solar	620	2022
Community Solar Program (FIT V)	21.5	2022
Offshore Wind (2,300 MW)		
South Fork Wind Farm	130	2023
Sunrise Wind	880	2024
Empire Wind 2	1,260	2026
Energy Storage (400 MW)		
East Hampton & Montauk Storage	10	2018 & 2019
TBD	175	2025
TBD	175	2030
Total	3,512	

Here are some of the initiatives LIPA is undertaking to stay on track with New York's climate goals:



Solar Energy

LIPA accounts for **36 percent of New York's distributed solar** projects, even though we are only 12.5 percent of the State's electric load. In 2021, the LIPA Board of Trustees approved a 36 MW solar project called Riverhead 2 in Calverton, which, will be the **largest solar farm on Long Island**.



Electric Vehicles (EVs)

With New York phasing out the sale of most internal combustion engine (ICE) cars by 2035, the time is now to accelerate the transition to electric vehicles. LIPA offers residential customers several electric rate options that provide a **25 to 40 percent discount on electricity used to charge vehicles overnight**. LIPA also has a **\$99 million plan to build out EV chargers by 2025**.



Heat Pumps

A typical residential customer with oil heat could **reduce their carbon footprint by 40 percent and save about \$1,000 a year** on heating by using electric heat via a cold climate heat pump. Even better, as the electric grid transitions to cleaner fuels, **the carbon savings will approach 100 percent**. LIPA offers attractive rebates for homeowners converting to a heat pump, allowing the additional cost of the heat pump to pay for itself.



Wind Power

In 2017, the LIPA Board approved **the country's first contract for an offshore wind farm in federal waters** – the South Fork Wind Farm. Since then, two additional offshore wind projects have been awarded agreements with the state to connect to the Long Island electric grid – **providing over 2,300 MW of offshore wind by 2026**.



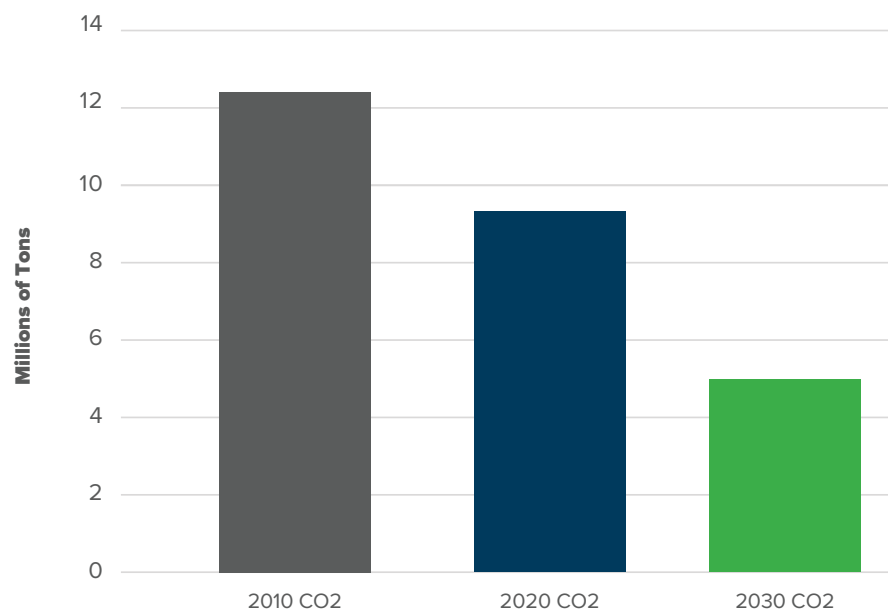
Battery Storage

In 2016, LIPA moved forward with the **largest battery storage project in the state** – a pair of 5 MW storage projects that each provide capacity for up to eight hours. These batteries store excess energy from renewables like wind and solar so homes and businesses can continue to be powered when needed. LIPA is now procuring an **additional 175 MW of battery storage** to be installed by 2025 to help balance electric loads on a grid with greater renewable energy.

Figure 10 shows the effect of planned resource additions on **LIPA's carbon emissions, which will decrease approximately 60 percent by 2030 from 2010 levels.**

Figure 10

Long Island Carbon Emissions to Decrease 60% by 2030



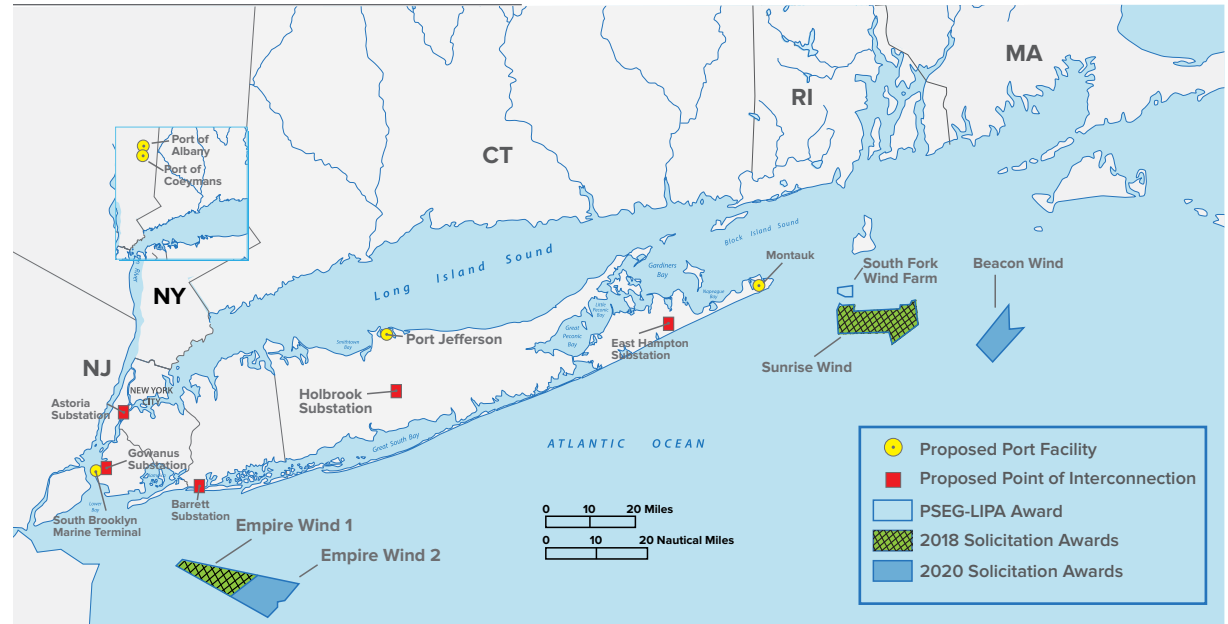
Offshore Wind and the Long Island Electric Grid

Offshore wind is poised to become a major source of clean energy for Long Island and New York State. As shown in Figure 11, with the New York State Energy Research and Development Authority (NYSERDA) acting as the utilities' joint procurement agent, **the State is well on its way to meeting the CLCPA mandate for 9,000 megawatts (MW) of offshore wind energy by 2035** – enough to power 6 million homes.

Figure 11

Local Offshore Wind Procurements

Source: NYSERDA



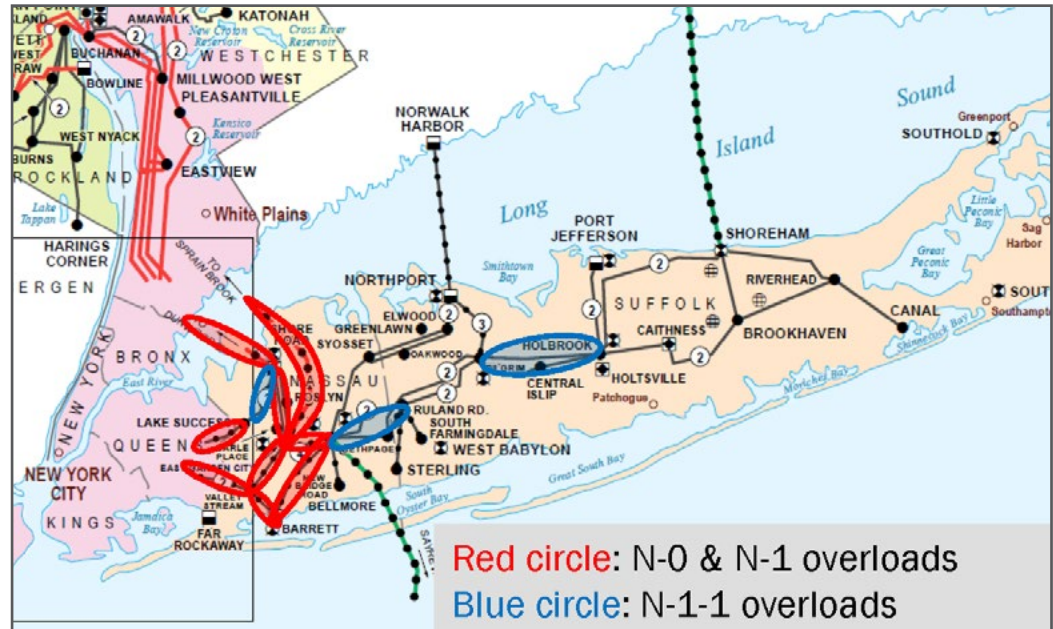
Project Name	Owner	Size (MW)	Contract Off-Taker	Interconnect Utility	In-Service Date
South Fork Wind	Joint venture of Ørsted A/S and Eversource Energy	130 MW	LIPA	LIPA	2023
Empire Wind 1	Equinor Wind US LLC	816 MW	NYSERDA	ConEd	2024-5
Sunrise Wind	Joint venture of Ørsted A/S and Eversource Energy	880 MW	NYSERDA	LIPA	2024-5
Empire Wind 2	Equinor Wind US LLC	1,260 MW	NYSERDA	LIPA	2026-7
Beacon Wind	Equinor Wind US LLC	1,230 MW	NYSERDA	ConEd	2028

All this new development will change the way that power is produced for electric customers on Long Island and beyond. More than half of the power produced by the projects shown in Figure 11 will inject directly into the LIPA service territory, and the rest into the adjacent Consolidated Edison (ConEd) territory. This will allow the downstate region to accelerate the retirement of fossil-fired generation.

Changing the way New York generates and distributes power involves more than building new clean generation facilities. The transmission and distribution system that brings power to customers' homes was built around the existing energy sources. Now, there will be tens of thousands of megawatts of power coming from different sources, interconnecting at different locations on the grid. It will require investment in the transmission and distribution system to make this new grid work.

LIPA and ConEd conducted a study in 2020 for the interconnection of 9,000 MW of offshore wind in the regional grid. That work was confirmed in New York State's Power Grid Study released in January 2021 and by the New York Independent System Operator (NYISO) in their review earlier this year.

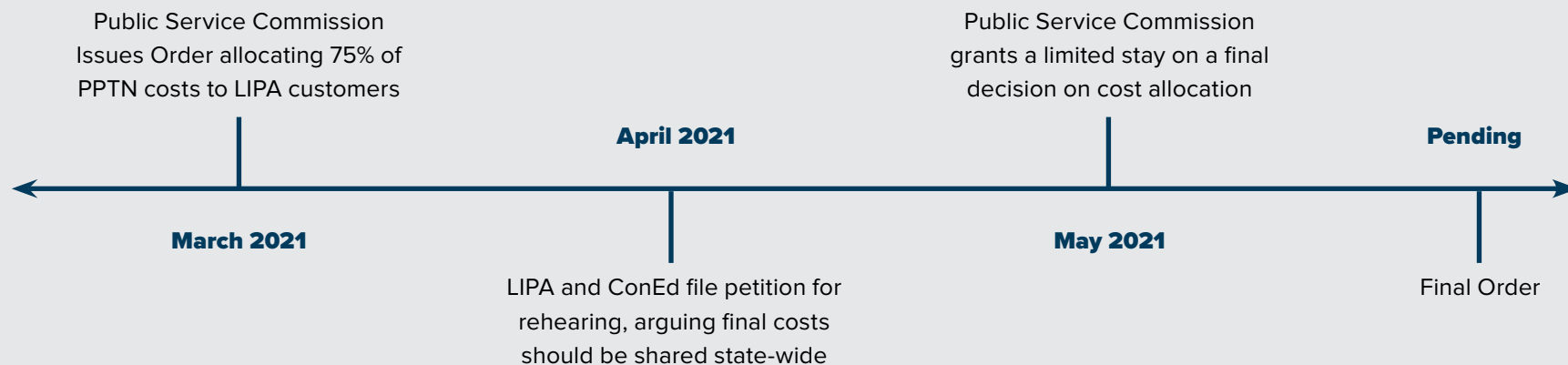
Integrating projected offshore wind and solar will require an estimated \$1.5 billion of investment in the Long Island electric grid between now and 2030.



LIPA strongly believes that the costs for the build out of the transmission and distribution system to meet CLCPA goals should be shared by electric consumers statewide. At the LIPA Board's request, we are advocating this position at the state level with the support of many Long Island stakeholders, as shown below. The amount of offshore wind to be built greatly exceeds what Long Island needs for its own energy needs. **Offshore wind is a major new clean energy source for all of New York, and so all state electric consumers should share in the cost to make the electric grid work.**

Cost For Public Policy Transmission Needs for Offshore Wind

LIPA strongly believes that the cost of transmission built to integrate offshore wind into the regional grid should be shared state-wide



LIPA's position is supported by many local and state elected officials and organizations

Association for a
Better Long Island, Inc.
Long Island Federation
of Labor AFL-CIO

IBEW 1049
Long Island Association

Nassau County Village
Officials Association
Nassau County Legislature

New York State Assembly
New York State Senate

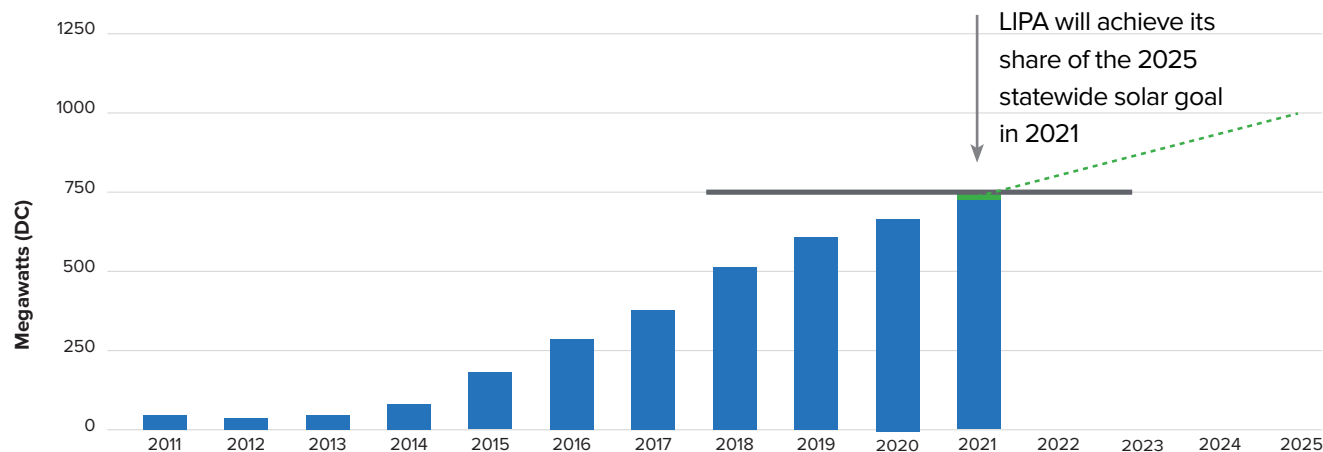
Suffolk County Village
Officials Association

Rooftop Solar and the Customer Benefit Contribution Charge

LIPA's long-standing support for rooftop solar has created the most vibrant solar market in New York. **That market continues to grow and soon we will exceed 750 MW of distributed solar on Long Island and the Rockaways**, as shown in Figure 12. In fact, LIPA represents **36 percent of New York's distributed solar market**, while being only **12.5 percent of the state's energy load** – outperforming our share of statewide targets by 300 percent.

Figure 12

Long Island and Rockaways Distributed Solar Capacity



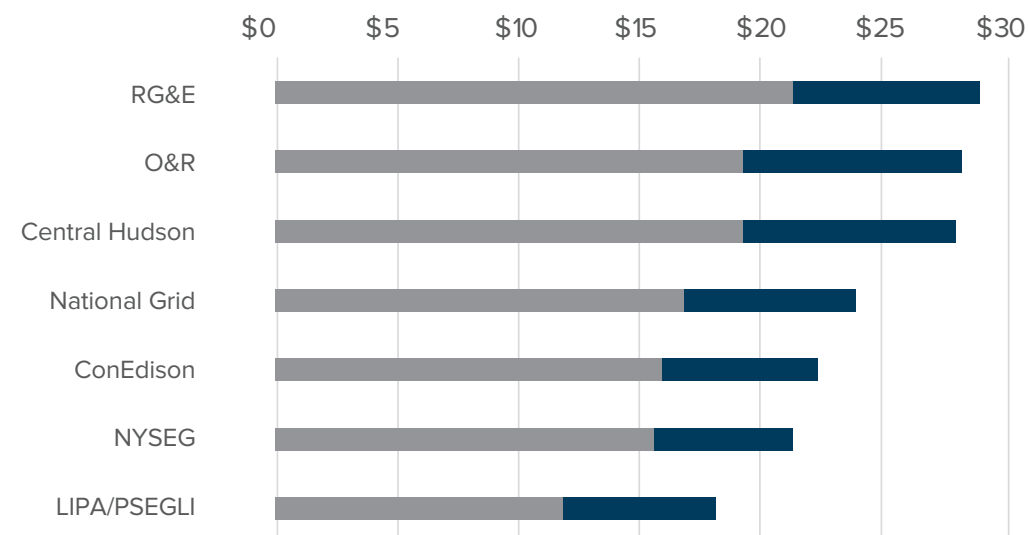
LIPA Leads New York
in Distribution Solar

36%
LIPA Share of
New York Solar Projects

12.5%
LIPA Share of
New York Electric Grid

Figure 13

Monthly Fixed Charges for Rooftop Solar in New York



	LIPA/ PSEGLI	NYSEG	ConEdison	National Grid	Central Hudson	O&R	RG&E
■ Basic Service Charge	\$13.20	\$16.05	\$16.50	\$17.00	\$19.50	\$19.50	\$21.70
■ Customer Benefit Charge	\$5.34	\$5.52	\$6.54	\$6.90	\$7.98	\$8.04	\$6.12

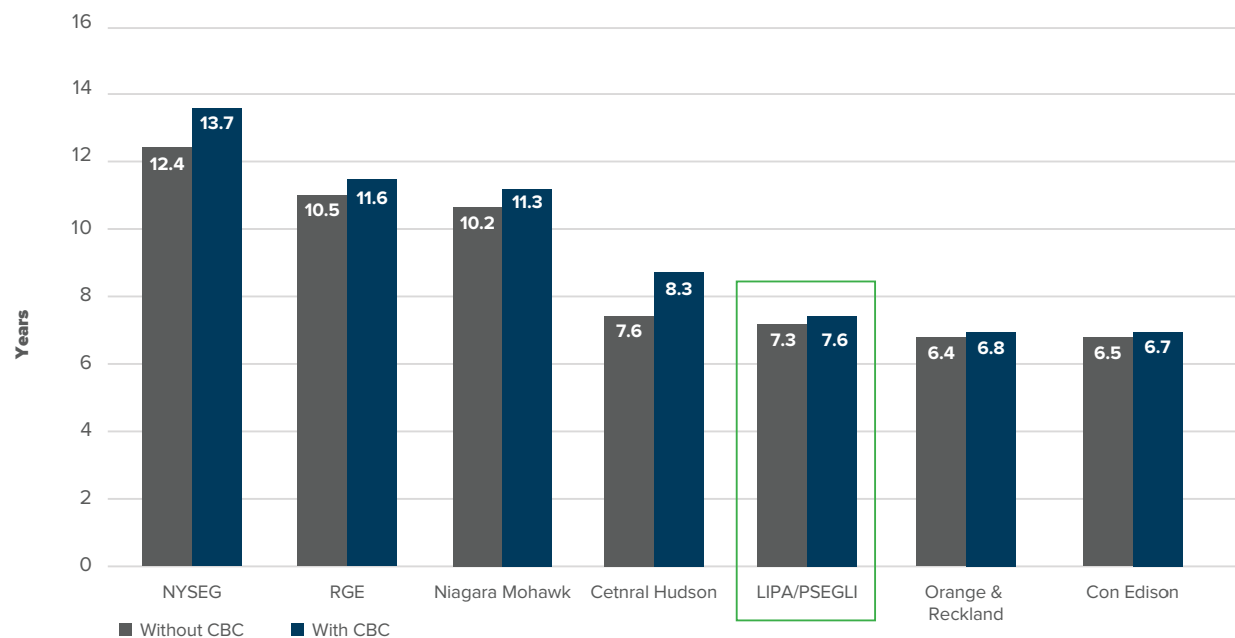
In July 2020, the New York State Public Service Commission (PSC) approved new compensation rules for distributed generation, creating a Customer Benefit Contribution (CBC) charge applicable to customers who enroll in net metering after January 1, 2022. **The CBC supports the cost of customer benefit programs like energy efficiency rebate programs, cold climate heat pumps rebates (to transition buildings from natural gas and fuel oil), electric vehicle charger incentives, grid-connected renewables, and low-income bill discount programs. LIPA spends over \$147 million per year on these programs, and they benefit all customers.** Currently, a customer with onsite generation like rooftop solar contributes less than half of what other customers pay towards these initiatives to a cleaner, more equitable energy system.

The LIPA Board is considering adopting the CBC on Long Island and the Rockaways. If approved, the charge will be \$0.89 per kW of solar. A customer that installs rooftop solar on an average-sized Long Island home would pay approximately \$5.34 per month, as shown in Figure 13. **The LIPA CBC would be the lowest in New York, and LIPA also has the lowest monthly basic service charge of the major New York utilities at \$13.20 per month.**

Most important, while all customers would contribute to the cost of **customer benefit programs with the CBC**, the **economics of rooftop solar for residential customers on Long Island would remain nearly unchanged**. As shown in Figure 14, the **LIPA service territory is among the most attractive places in New York to install rooftop solar**, and the **CBC adds only four months to the payback time for a typical customer**. With a payback period of 7.6 years, rooftop solar customers on Long Island have a rate of return of approximately 10 percent on their investment.

Figure 14

Simple Payback Period for an Average Residential Rooftop Solar Project



Note: Comparison includes NY Sun incentives where available

LIPA's 2022 Integrated Resource Plan

Every three to five years, LIPA conducts an Integrated Resource Plan (IRP) to study the future supply- and demand-side resources needed to power the Long Island grid. LIPA's 2022 IRP will chart a path towards a **zero-carbon electric grid by 2040**, while meeting electric customer needs **reliably and affordably**.

The IRP will ultimately result in an action plan that will identify the key activities and investments that LIPA will need to make to meet state goals.

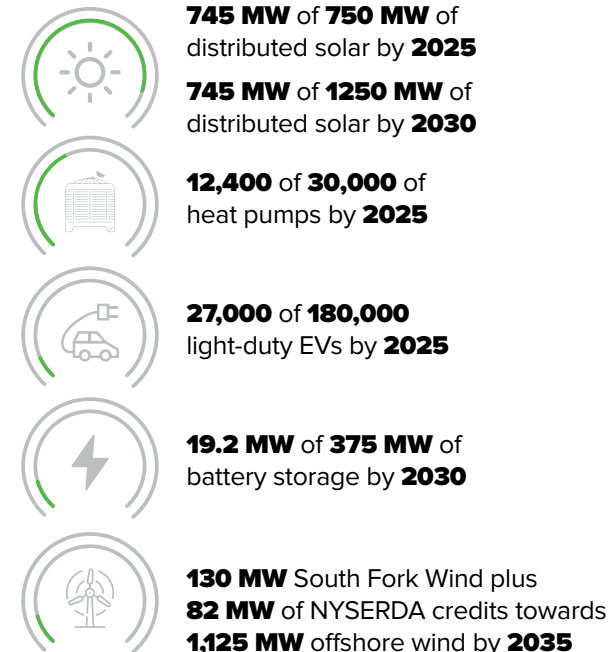
Key objectives for LIPA's IRP include:

- Supporting and meeting CLCPA goals
- Retiring fossil-fueled generation
- Integrating substantial amounts of renewable energy resources
- Identifying the impacts of beneficial electrification
- Increasing the availability of clean energy technologies in disadvantaged communities

The current IRP began on June 2021 and will be completed in the **third quarter of 2022**. Figure 15 shows LIPA's progress towards its share of certain statewide clean energy goals.

Figure 15

LIPA Clean Energy Goal Update



Update on New York's Climate Action Council

The New York State Climate Action Council (CAC) is a 22-member committee established as part of the State's CLCPA to **chart the course to New York's bold clean energy and climate future**. LIPA's Chief Executive Officer, Thomas Falcone, is a member of the CAC and other LIPA staff participate in its working groups.

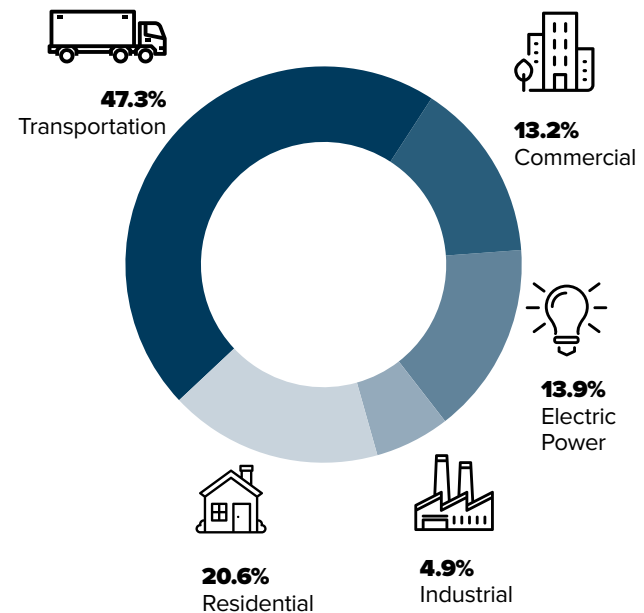
In October 2021, the CAC released the initial results of an "Integration Analysis" that lays out **several scenarios to achieve carbon neutrality across all sectors of the New York economy by mid-century**.

The electric grid is at the center of achieving the State's carbon reduction goals. As shown in Figure 16, most of New York's carbon emissions come from transportation and heating of residential and commercial buildings. In fact, only 13.9 percent of the State's emissions come from the electric grid.

Figure 16

New York State Current Estimated Green House Gas Emissions by Sector

Source: US Energy Information Agency



Here are three important takeaways from the CAC's work:

- **New York aims to achieve a zero-carbon electric grid and then to use that grid as the fuel of the future** for transportation and heating (think electric vehicles and cold-climate heat pumps).
- Electrifying transportation and heating, even with aggressive energy efficiency measures, will **more than double the amount of energy distributed through the electric grid by 2050**.
- Achieving a zero-carbon electric grid by 2040 will require **16,000 to 19,000 MW of offshore wind, 19,000 to 21,000 MW of 4-8 hour storage, and 15,000 to 23,000 MW of zero-carbon controllable clean energy technologies** (e.g., green hydrogen that can be dispatched on demand to balance supply and demand on the electric grid).

In support of the State's climate goals, **LIPA has already started transitioning its power supply portfolio away from fossil fuels**, promoting beneficial electrification, and planning new investments in the transmission system to accommodate the large-scale expansion of offshore wind and other sources of clean energy.



Budget by the Numbers

Budget by the Numbers

The 2022 Budget consists of an Operating Budget of **\$3.9 billion** and a Capital Budget of **\$760 million**. The Operating Budget, shown in Figure 17, funds delivery and power supply costs, energy efficiency and distributed energy programs, taxes, and debt service. The Capital Budget, shown in Figure 18, funds long-life infrastructure investments such as transmission lines, substations, poles, and wires, as well as information technology, vehicle fleet, and other assets.

Figure 17

2022 Operating Budget (\$ thousands)

Operating Revenues	3,851,258
Grant & Other Income	60,639
Total Revenues and Income	3,911,897
Power Supply Costs	1,655,302
Delivery Costs	838,201
PILOTs, Taxes & Fees	568,398
Interest Payments	369,547
Debt Reduction & OPEB	480,449
Operating Budget	3,911,897
Fixed Obligation Coverage	
LIPA Debt Plus Leases	1.40x
LIPA & UDSA Debt Plus Leases	1.26x

Figure 18

2022 Capital Budget (\$ thousands)

Capital Projects	687,181
Storm Hardening	72,690
Capital Budget	759,871
Funding from Operating Budget	223,610
FEMA Storm Hardening Grant	2,421
Debt Issued to Fund Projects	533,840
Funding Sources	759,871
Percent of Capital Projects Funded from Debt	70%

Changes in the Operating Budget

The 2022 Operating Budget includes Operating Revenues of \$3.9 billion, an increase of \$189.3 million from the 2021 Budget. Actual Operating Revenues are projected to decline \$148.2 million, as Operating Revenues came in above budget in 2021 due to higher Power Supply and storm restoration costs. Changes are shown in Figure 19 and described below.

Figure 19

Changes in Operating Budget





Power Supply

Power Supply, the cost to purchase or generate electricity for customers, is forecast to increase by \$253.1 million for 2022 compared to the 2021 Budget, driven primarily by higher commodity costs. However, only net costs of \$103.1 million are included in the 2022 Budget due to offsets from LIPA's energy commodity hedging program.

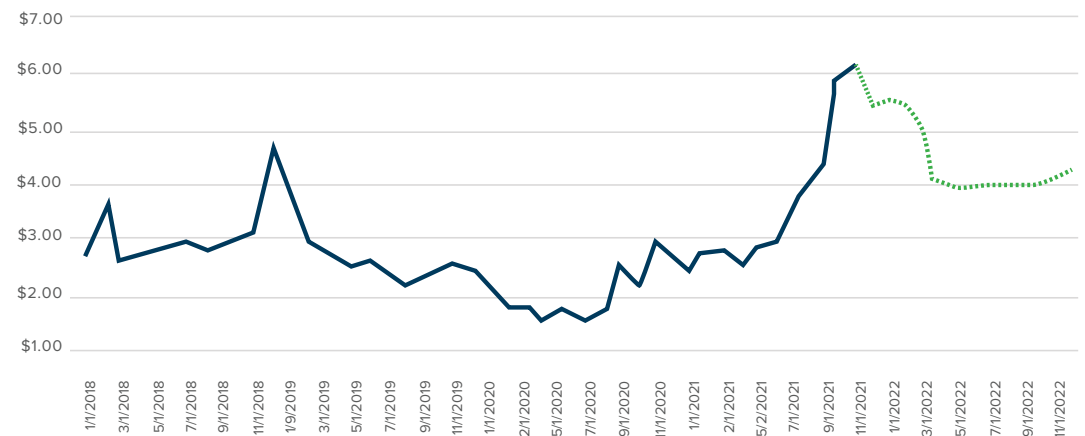
The wholesale market price of natural gas has increased dramatically in 2021 and forward prices (i.e., the price LIPA could buy natural gas for delivery in 2022) remain elevated, as shown in Figure 20. LIPA budgets for commodity costs at their current prices each year.

LIPA maintains a commodity hedging program to reduce the volatility of commodity costs experienced by customers in their monthly electric bills. Based on current commodity prices, existing hedges would offset approximately \$150 million of the \$253.1 million of higher commodity costs in 2022.

While budgeted Power Supply costs will increase, actual 2022 Power Supply costs are projected to be \$148.2 million lower than 2021. Actual Power Supply costs in 2021 came in approximately \$251 million above budget primarily due to transmission cable outages resulting in more run time for higher cost on-island generation.

Figure 20

Natural Gas Prices Have Increased Dramatically in 2021



Power Plant Property Tax Challenges

The Power Supply budget also reflects a \$6.6 million decrease in property taxes on legacy power plants under contract to LIPA.

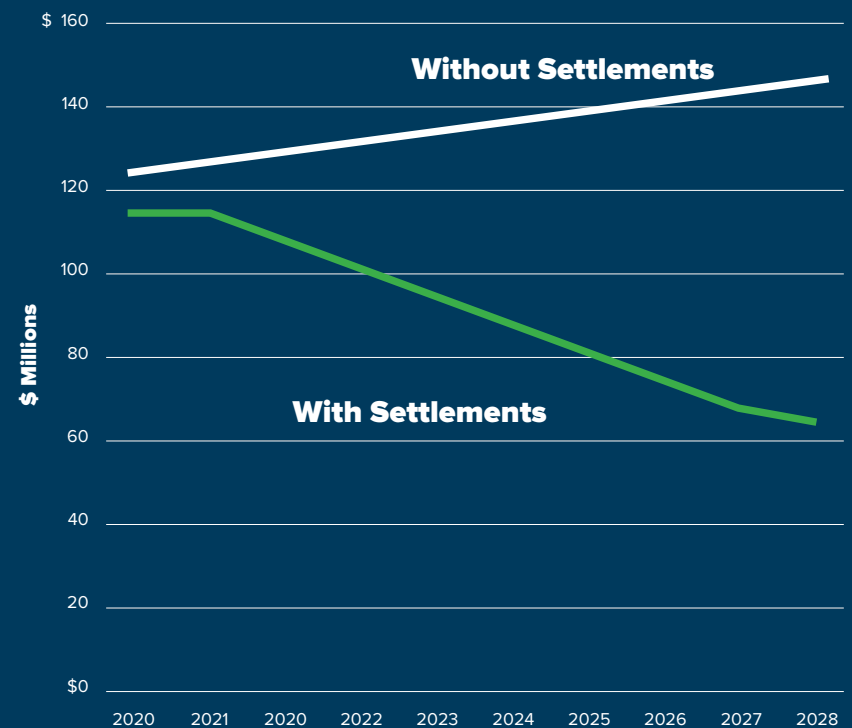
New York has aggressive targets to rapidly add new, cleaner sources of energy to the electric grid. Recognizing this reality, **LIPA is working to transition our most excessively taxed power plants to a more sustainable energy future.**

In 2018, LIPA, the Town of Brookhaven, and the Village of Port Jefferson reached a compromise on the tax bills for the Port Jefferson Power Station. In September 2020, LIPA also reached an agreement with the Huntington Town Board and Northport-East Northport School District for the Northport Power Station. After more than a decade of litigation, **these agreements maintain significant tax benefits for the host communities while saving LIPA's customers over \$364 million through 2028**, as shown in Figure 21.

In 2019, LIPA reached a tentative settlement with Nassau County for the E.F. Barrett and Glenwood Landing power plants. The settlement was contingent on approval of a payment-in-lieu-of-tax (PILOT) agreement by the Nassau County Legislature, which unfortunately did not bring the issue to a vote. **LIPA is continuing our efforts to provide tax fairness to all customers** and will now continue this effort through the courts. Trial for the E.F. Barrett and Glenwood Landing tax cases will begin in early 2022.

Figure 21

Power Plant Tax Settlements Will Save Customers \$364 Million Through 2028¹



¹ Savings from the Port Jefferson Power Station and Northport Power Station settlements

Debt Payments & Cash Contribution to Capital Projects:

Debt payments are budgeted to decline \$10.1 million, while LIPA is increasing the level of operating revenue used to fund capital projects (i.e. “coverage”) by \$38.1 million, for a net increase in total debt payments and coverage of \$28.0 million. This increase in coverage is in accordance with the Board’s Policy on Debt and Access to the Credit Markets to reduce leverage to industry standard levels and thereby reduce cost to customers over time. The Board’s policy has resulted in four upgrades to LIPA’s credit ratings since 2013 and a recent change to a “positive outlook” by Fitch Ratings (see Fitch Outlook Upgrade). LIPA has used its stronger credit ratings and favorable market conditions to lower borrowing costs, thereby generating savings for customers. For example, **refinancing savings from lower interest rates in 2022 have reduced debt payments by more than the increase in coverage.** In 2022, LIPA will be using new authority to issue securitization bonds to take advantage of the current low interest rate environment to capture additional savings for customers (see UDSA Bill for Debt Savings).

Fitch Outlook Upgrade

In September 2021, Fitch Ratings revised its credit rating outlook on LIPA from “Stable” to “Positive.” With this positive outlook, LIPA is on track for another credit rating upgrade within the next 12-to-24 months. This news demonstrates the value of the LIPA Board of Trustees’ continued commitment to **providing our customers with lower cost through sound fiscal policy and debt reduction.**

In 2014, LIPA had the lowest credit ratings of any large public power authority and because of this, LIPA was paying higher interest rates and bank credit costs than other utilities. That’s why in 2015 the LIPA Board adopted a plan to **reduce LIPA’s leverage, cost of debt, and financing costs.** This plan has proven successful and has resulted in over **\$600 million of savings for customers and four upgrades of LIPA’s bond ratings** (see Figure 22). The Board revisited that plan in November 2020 and adopted a new Financial Policy Report with targets for the next five years.

While there is still more work to do, this news demonstrates we are on the right financial path.

Figure 22

LIPA Continues to Receive Credit Rating Upgrades

	2013 Ratings (Outlook)	2021 Ratings (Outlook)
Moody’s Investors Service	Baa1 (Negative)	A2 (Stable)
Standard and Poor’s	A- (Negative)	A (Stable)
Fitch Ratings	A- (Negative)	A (Positive)



UDSA Bill for Debt Savings

In August 2021, New York's Governor signed a bill into law authorizing issuance of up to \$8 billion of restructuring bonds by the Utility Debt Securitization Authority (UDSA). UDSA bonds are issued to finance LIPA debt at a lower interest rate, or to fund investment in the resiliency of LIPA's transmission and distribution system.

UDSA (rated triple-A) provides a **lower cost of financing than LIPA bonds**. UDSA financings have saved LIPA customers \$492 million in present value interest savings to date and **several hundred million of additional savings are available at current interest rates with the passage of this bill**.



Capital funds from UDSA bond sales could be used to upgrade transmission and distribution infrastructure **including stronger utility poles, cross arms, wire, selective undergrounding, etc.**



Funds could also be used to **improve the resilience of the distribution system** through the purchase and installation of **new automated sectionalizing switches** that limit the impact of an outage on an electric circuit.



LIPA has been expanding the use of **sensors and smart meters** to **speed outage detection and restoration**.

Contractual Cost Increases and Other Adjustments

The Operating Budget increases by \$16.7 million or 2 percent to reflect contractual (non-wage) cost increases.

Enhanced Vegetation Management

Among the recommendations adopted by the LIPA Board after Tropical Storm Isaias was a re-evaluation of vegetation management practices. That review led to an expansion of vegetation management by \$14.9 million for 2022, including an expanded Hazard Tree Removal Program targeting 12,000 trees (up from 3,000 today); utilizing intelligence and analytics regarding species, growth rate, and location to limit vegetation-caused outages; and executing a new “Trim to Sky” protocol on circuits to the first protective device on each circuit. Each of these initiatives is reflected in PSEG Long Island’s 2022 performance metrics.

Wages

PSEG Long Island’s contractual wage increases are forecast at \$8.9 million or three percent in 2022.

Performance Metric-Based Initiatives

The LIPA Board adopted 167 recommendations to improve management, emergency management, and information technology, among other areas, after Tropical Storm Isaias. Several of these recommendations result in new budget requirements in either the Operating or Capital Budget. In addition to the Vegetation Management and IT System Enhancements, separately described, other performance metric-based initiatives for 2022 are budgeted at \$7.6 million, including investments to improve: management of assets, procurement and financial oversight designed to tighten controls and reduce cost; and expanded customer communication.

IT Investments

Among the recommendations adopted by the LIPA Board after Tropical Storm Isaias were requirements to thoroughly exercise Disaster Recovery and Business Continuity Plans for all critical systems/processes, improve system Implementation performance for IT projects, and separate LIPA IT systems from PSEG New Jersey systems. These initiatives result in a \$6.9 million increase to the 2022 Operating Budget. Each of these initiatives is reflected in PSEG Long Island’s 2022 performance metrics.



Storm Budget

LIPA's storm budget funds the preparation, response, and repairs necessary to restore service after storms. The 2022 storm budget of \$74.5 million reflects an increase of \$4.5 million over the prior year. As shown in Figure 25, storm restoration costs continue to be above historical levels. These costs are reconciled to actuals each year through the Delivery Service Adjustment (DSA) to customer bills. This \$4.5 million increase in the storm budget is to ensure LIPA budgets for typical costs each year, knowing that this cost is particularly volatile based on weather.

Utility 2.0

Utility 2.0 funding supports programs designed to promote energy efficiency and beneficial electrification. The Utility 2.0 budget is based on an [annual filing](#) made by PSEG Long Island with LIPA and the DPS in June of each year. The budget is projected to increase by \$1.6 million versus the prior year.

Transmission and Distribution System Property Taxes

LIPA's transmission and distribution system is subject to payments-in-lieu-of-taxes from local municipalities. LIPA customers pay the costs of these property-based taxes. The LIPA Reform Act capped increases in these taxes at two percent per year to reduce the burden on customers of past runaway increases. 2022 property taxes are budgeted to increase by \$1.1 million or less than one percent.

Productivity Initiatives

PSEG Long Island is reducing operating expenses by \$2.4 million through efficiencies.

Uncollectible Expense

LIPA is budgeting a \$1.6 million decrease in the uncollectible expense (i.e., write-offs of customer bills) compared to the 2021 budget. Still, the 2022 Budget, at \$28.8 million, remains elevated as compared to pre-COVID-19 pandemic years where the average level of uncollectible expense was approximately \$18 million. The budgeted level of uncollectible expense will be reconciled to actuals through the Delivery Service Adjustment in 2023.

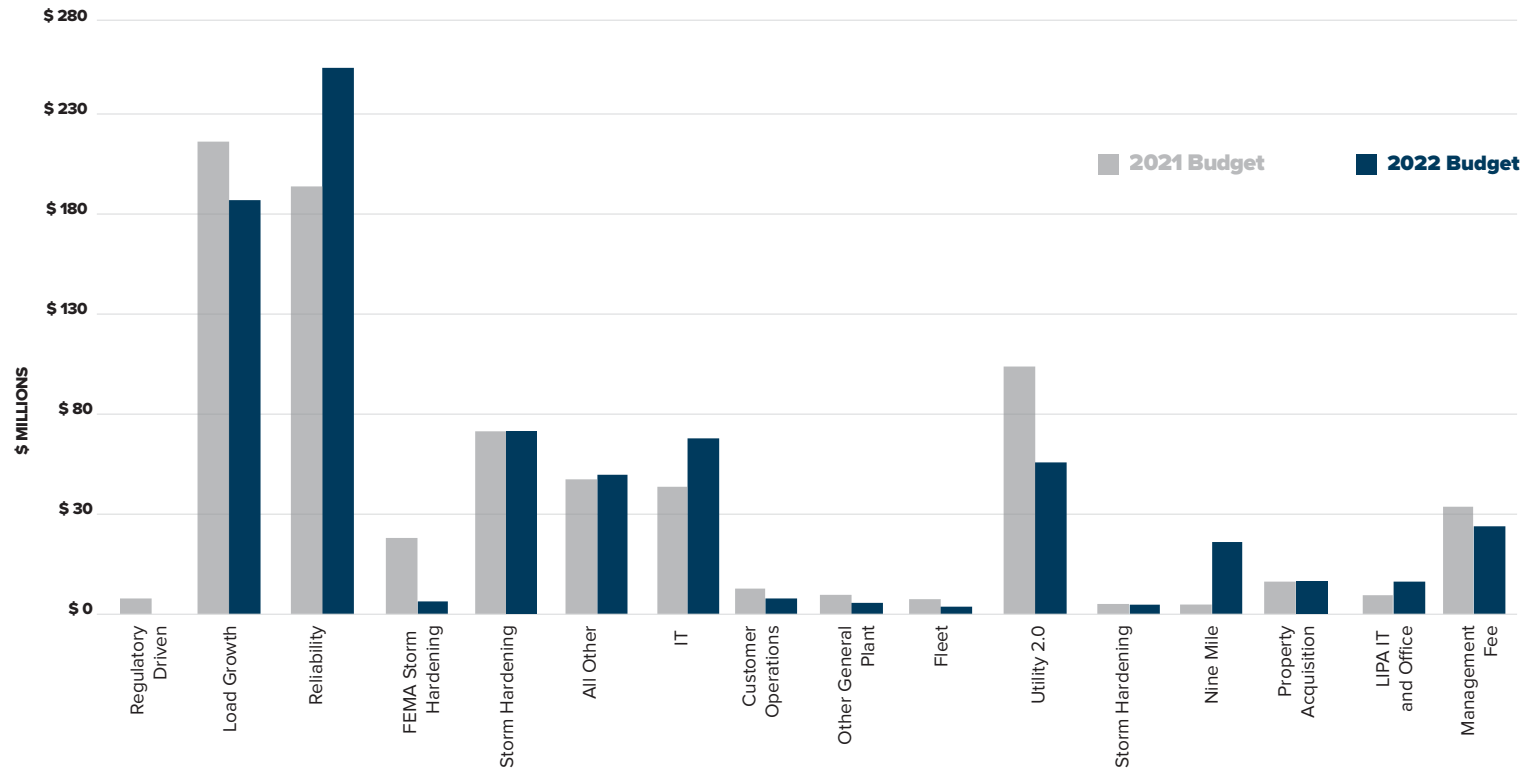


Changes in the Capital Budget

Figure 23 shows the \$760 million 2022 Capital Budget as compared to the \$791 million 2021 Budget. **The Capital Budget is decreasing by \$31 million from the prior year.** The most significant changes are a \$51 million increase for reliability investments and a \$56 million decrease for Utility 2.0, which is due to the substantial completion of the deployment of smart meters in 2021.

The LIPA Board continues to invest towards a goal of providing reliability within the top 10% of electric utilities. The Board also continues substantial funding towards improving system resiliency. **The 2022 Budget includes \$70 million of storm hardening investment.** In addition, there are several new initiatives in 2022 that result from the recommendations adopted by the LIPA Board after Tropical Storm Isaias. These new initiatives will result in refined resiliency plans for 2023 and beyond (see Making the Electric Grid More Resilient). The work of building a reliable and resilient grid remains a steadfast LIPA Board priority.

Figure 23
Changes in Capital Budget



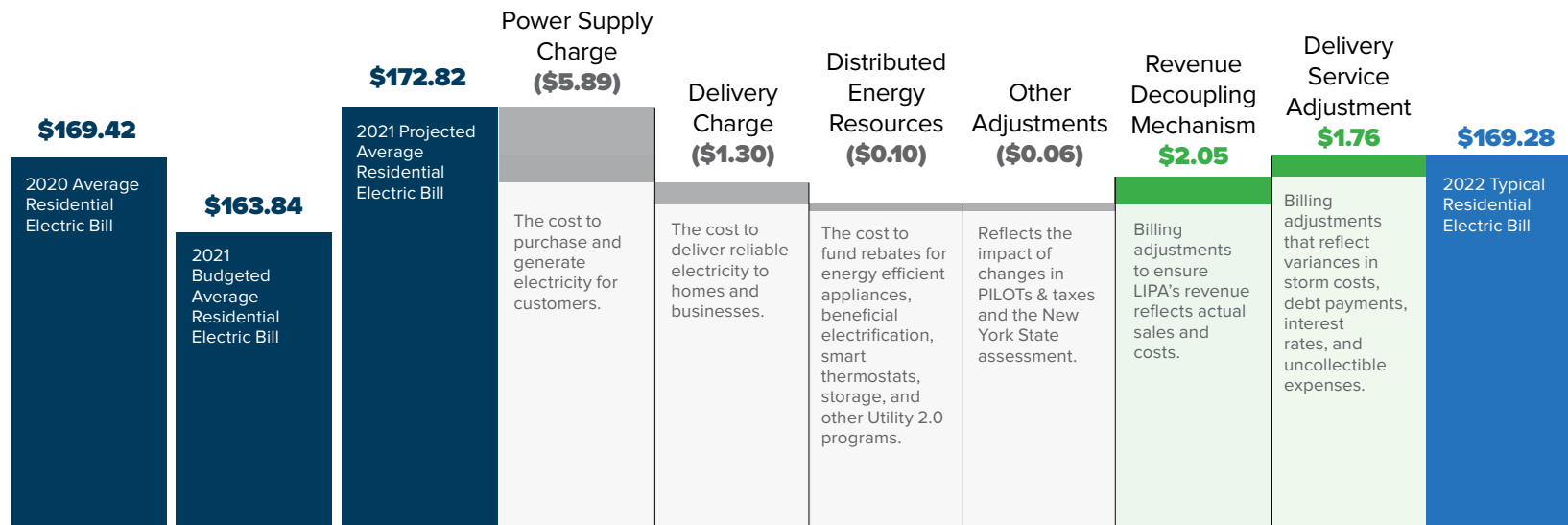
Electric Bills for 2022

Figure 24 shows the 2022 Budget in terms of the average residential customer bill on a weather-normalized basis (i.e. representing historically normal Long Island and Rockaways weather). **Electric bills are budgeted to decrease from \$172.82 per month in 2021 to \$169.28 in 2022. This compares to average residential electric bills of \$169.42 per month in 2020.**

The electric bill is made up of several components, including the Delivery Charge, Power Supply Charge, Distributed Energy Resources (DER) Charge, Delivery Service Adjustment (DSA), and Revenue Decoupling Mechanism (RDM). The DSA and RDM are adjusted each year to reconcile costs and sales assumptions from the prior year for variations in sales, storm restoration costs, debt payments, interest rates, and uncollectible expenses. The major changes for the year are summarized below.

Figure 24

Average Residential Customer Electric Bill (Weather-Normalized)



Power Supply Charge

The largest change for residential customer electric bills will be a decline in the Power Supply Charge of \$5.89 per month. This reflects two significant changes. First, while budgeted power supply costs are increasing \$103 million from 2021 to 2022 due to higher commodity costs, actual power supply costs in 2021 came in approximately \$251 million above budget. The actual costs were higher in 2021 primarily due to outages of transmission lines that connect Long Island to the regional electric grid, which is a source of lower cost power. Therefore, despite *budgeted* commodity cost increases, *actual* 2022 power supply costs are forecast to decline by \$148 million. Additionally, as discussed below, use per customer is forecast to decline from 2021 levels as usage patterns at least partially return to pre COVID-19 patterns.

Revenue Decoupling Mechanism

The second biggest change for 2022 is a reduction in the RDM bill credit to customers by \$2.05 per month. The RDM reconciles budgeted sales to actual sales in each customer class in the following year (i.e. if residential sales come in above budget due to weather or usage patterns, the excess revenue is credited to customers in the following year). As shown in Figure 27, use per customer has come in much higher than budget in both 2020 and 2021 due to COVID-19. However, the 2021 excess of actuals over budget was less than in 2020. As a result, **the \$5 per month RDM bill credit to customers in 2021 (based on 2020 above budget sales) will decline to \$3 per month in 2022 (based on 2021 above budget sales). The decline in the bill credit results in an increase to customer bills of \$2.05 per month.**

Delivery Service Adjustment

The DSA reconciles actual costs to budgeted levels for several cost categories that are largely out of LIPA's control. These costs include storms, debt payments, interest rates, and uncollectible expense. This results in customers only paying the actual costs incurred by LIPA for these cost categories. **The DSA is forecast to increase by \$1.76 per month in 2021. Most of this increase is due to above budget storm costs,** with actual storm restoration expense forecast for 2021 at \$147 million compared to a budget of \$70 million. Tropical Storm Henri, which was forecast to directly land on Long Island as a category 1 hurricane in August 2021, did not materialize but represents \$59 million of this overage (see Tropical Storm Henri).

Delivery Charge

The Delivery Charge will increase by 2.3% for 2022; however, delivery costs will decline by \$1.30 per month, with the predicted reduction in use per customer (see Figure 27) more than offsetting the price increase.



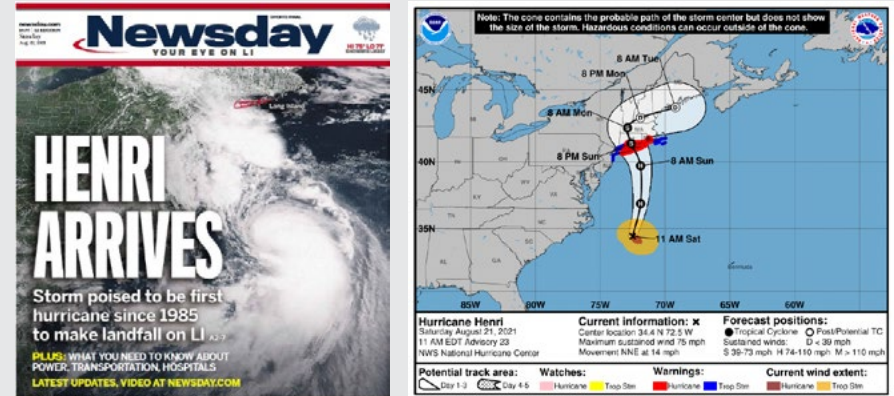
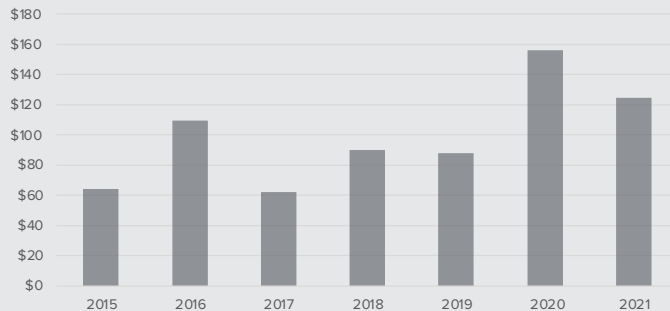
Hurricane Henri

In August 2021, PSEG Long Island prepared for a direct strike on Long Island from Hurricane Henri. Drawing comparisons to Sandy, the storm was predicted to make landfall with sustained winds of 75 miles per hour, gusts up to 100 miles per hour, and life-threatening storm surge of three to five feet. State and Federal Disaster Emergencies were declared for Nassau, Suffolk, Queens, and other downstate counties, signifying the imminent threat. **Such a storm would have caused hundreds of thousands of customers to lose power** and PSEG Long Island took all necessary steps to see that service would be restored as quickly as possible, including pre-staging thousands of electrical workers on Long Island before the storm at a cost of tens of millions of dollars.

Hurricane Henri Storm Cost	\$59M
PSEGLI Crew Members + Contractors	777
Off-Island Crews Pre-Staged	2,730
Customer Outages	4,767

Figure 25

LIPA's Storm Costs (in \$ million)



Source: US NOAA National Weather Service

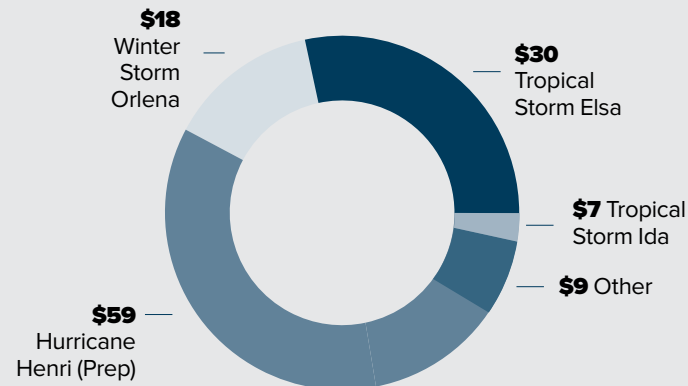
On August 22, the path of the storm changed and had little effect on Long Island. Only 4,767 customers lost power.

While we may have dodged a bullet, the prudent preparations for Henri still cost \$59 million.

Figure 26

LIPA's Storm Costs 2021 (in \$ million)

Net of actual/projected FEMA reimbursement

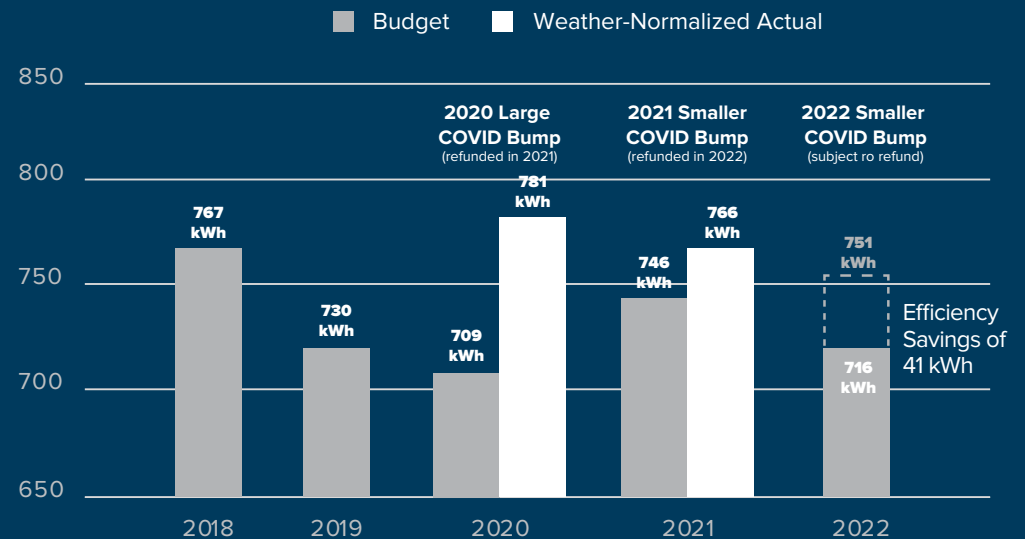


Residential Customer Usage in 2022

The greatest uncertainty in forecasting electric bills for 2022 is customer usage. Residential electric sales per customer have typically declined each year due to improvements in energy efficiency (for example, new lighting and appliances in customer homes). In fact LIPA spends about \$90 million per year to reduce electric sales. However, **the COVID-19 pandemic resulted in a significant change to customer behavior**, with more customers working from home and many businesses operating with minimum in-person staff. Figure 27 shows weather-normalized residential use per customer for the last several years. The 2020 Budget forecast a decline in residential use per customer from 730 kWh to 709 kWh per month. Instead, **the COVID-19 pandemic, which began in March 2020, caused residential use per customer to increase to 781 kWh in 2020 (up 7.0% compared to 2019 budgeted levels)**. The 2021 Budget forecast some return to normalcy with use per customer of 746 kWh per month. Actual monthly usage has come in at 766 kWh per month in 2021.

The 2022 Budget forecasts use per customer at 716 kWh per month (751 kWh before efficiency savings), reflecting a partial return to historical usage patterns and continued investment in energy efficiency programs. As in 2020 and 2021, should actual usage come in above budget, customers will receive a credit on 2023 electric bills for the difference.

Figure 27
Residential Use per Customer



Keeping Cost Low for Our Customers

The LIPA Board's Policy on customer affordability insists on electric rates that are:

- at the lowest fiscally and operationally sound levels;
- comparable to other regional utilities; and
- in line with the rate of inflation.

The only way to achieve these goals while continuing to invest in a clean, reliable electric grid is to operate lean. **Operating lean means achieving a balance between cost and service to get the most out of every dollar.** Figure 28 shows the savings from operating lean for the 2022 budget. These are the cumulative effects of many decisions and initiatives since 2014. **The \$999 million of cost savings in 2022 equals 26 percent of electric bills, or about \$44 per month for a typical residential customer.**

Figure 28

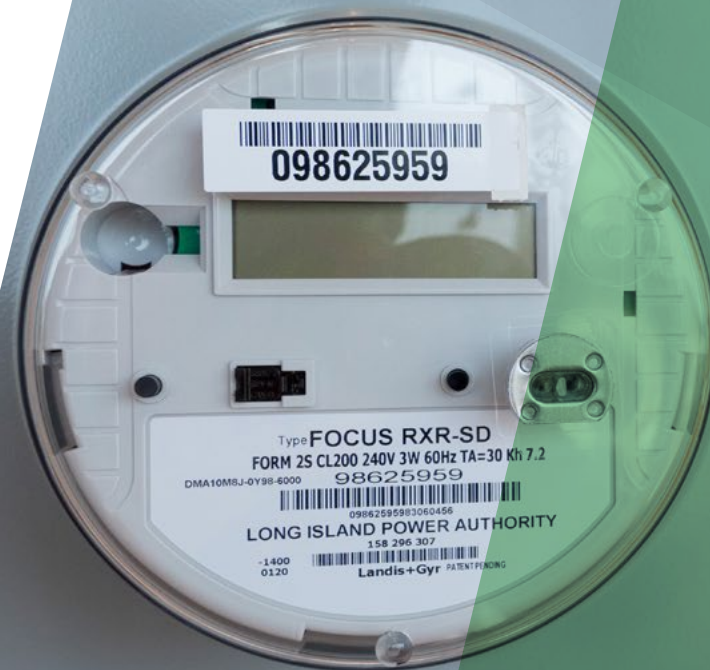
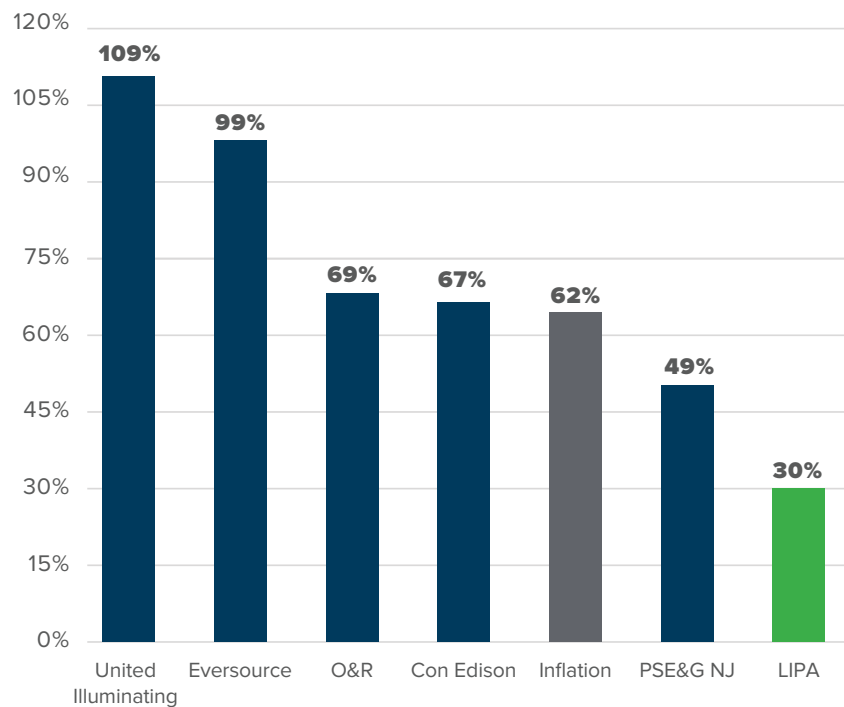
\$999 Million Customer Savings in 2022 from Operating Lean

Millions	
Discontinued investments in combined cycle plants	\$348
LIPA Reform Act 2% Tax Cap	\$272
Commodity hedging (based on current prices)	\$150
Renegotiating expiring power purchase agreements	\$56
Refinancing existing debt	\$49
Reduction to wholesale market and off-island transmission costs	\$39
Investing in cost-effective energy efficiency	\$29
Power plant property tax savings	\$20
Smart Meter savings	\$17
Operating savings and improved productivity	\$11
Power plant pension and retirement savings	\$8
Total	\$999

Operating lean has resulted in system average rates that have increased at less than the rate of inflation and less than those of neighboring utilities, as shown in Figure 29.

Figure 29

LIPA's System Average Electric Rates Increase at Less than Inflation or Neighboring Utilities (1997 to 2020)

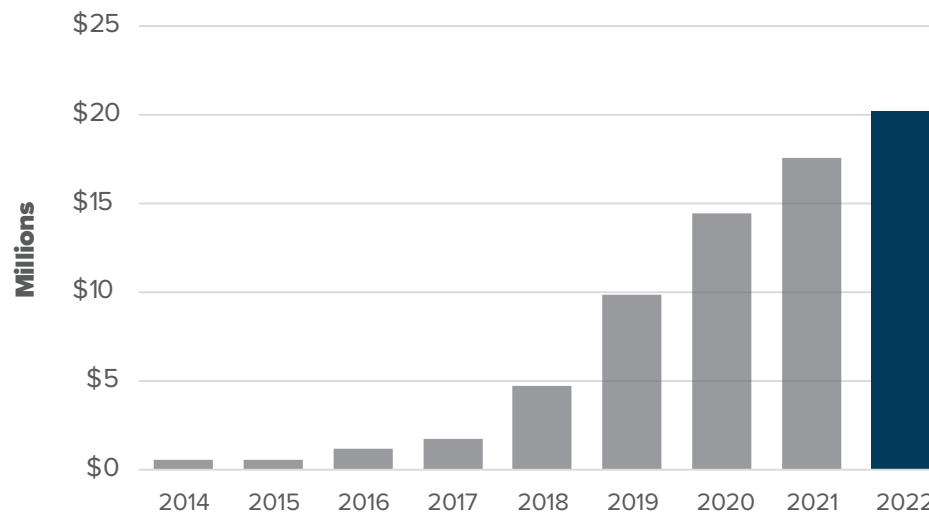


Increased Household Assistance for Customers Experiencing Economic Hardship

LIPA is committed to affordability, especially for our most vulnerable customers. The budget for discounts for low and moderate-income customers will increase to \$20.2 million in 2022, as shown in Figure 30. LIPA is also working with stakeholders to design enhanced household assistance discounts for our most vulnerable customers, to be launched in 2022.

Low-income households who have fallen behind on their utility bills due to COVID-19 may also be eligible for a one-time benefit of up to \$10,000 to be applied to past-due balances. This temporary benefit is funded by the American Rescue Plan Act of 2021, and customers are encouraged to contact PSEG Long Island customer service to find out if they are eligible.

Figure 30
Funding for
Low-Income
Customer
Discounts



Clean Electric Heating and Energy Efficiency for Low-Income Households

To ensure that low- and moderate-income households can afford to transition from fossil-fuel powered heating and inefficient electric resistance heating to clean, electric heat pumps, **LIPA offers enhanced heat pump incentives for low-income households.** With Home Comfort Plus, funded at \$4 million in 2022, low-income households can receive up to \$14,400 to replace a gas furnace with a whole-house cold climate heat pump system, up to \$15,200 to replace an oil furnace, and up to \$16,000 to replace an electric resistance heating system.

LIPA also provides enhanced support for low-income households to make home efficiency improvements. Through the Residential Energy Affordability Program, funded at \$5.4 million in 2022, households can receive personalized energy audits and free or discounted energy efficient appliances.



Conclusion

The LIPA Board of Trustees is committed to providing an excellent utility for our customers. The Board's standards are extremely high – a utility that provides top 25 percent customer satisfaction, top ten percent reliability, a zero-carbon electric grid by 2040, and electric rates at the lowest possible cost.

"Perfection is not attainable, but if we chase perfection we can catch excellence."

– Vince Lombardi

The last 15 months have been arduous for both LIPA and PSEG Long Island. The new reformed contract with PSEG Long Island sets forth a new chapter in the energy history of Long Island and the Rockaways. **This Budget funds the Board's priorities and advances us towards the clean, reliable, and customer-first utility our customers deserve.**

We are not perfect. But, like Vince Lombardi, we are going to chase perfection.

Thank you to all the employees of LIPA and PSEG Long Island for the hard work that they do daily on behalf of our customers.

Thomas Falcone
Chief Executive Office

November 17, 2021

Section Two | 2022 Proposed Budget



Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Revenue Requirements

LIPA's annual revenue requirements are budgeted to increase from \$3.7 billion in 2021 to \$3.9 billion in 2022. Increases in power supply charges and operating costs are the primary drivers of the increase. These costs are further detailed on the following pages.

LIPA's revenue requirements are calculated in accordance with the practices of large public power utilities in the United States (the Public Power Model) and reflect the recovery of operating expenses in the current year plus debt and other fixed obligations, including fiscally sound levels of fixed obligation coverage.

LIPA's methodology for calculating revenue requirements and fixed obligation coverage excludes certain non-cash expenses such as depreciation and amortization (the costs of which are generally recovered in revenues through debt service payments) and the voluntary contributions to the Other Post Employment Benefits (OPEBs) Account, which are available to first make debt payments, if needed. LIPA's financial policies are further detailed in the description of debt service and fixed obligation coverage requirements.

Revenue Requirements
(Thousands of Dollars)

Description	2020		2021		2022		2023	
	Actual		Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Operating and Managed Expenses								
PSEG Long Island Operating and Managed Expenses (a)	\$ 1,023,536		\$ 742,561	\$ 810,990	\$ 792,046	\$ 49,485	\$ 782,576	\$ (9,470)
PILOTs - Property-Based Taxes	295,534		302,802	297,879	303,929	1,127	309,844	5,915
PILOTs - Revenue-Based Taxes	37,504		36,694	38,474	40,556	3,861	42,437	1,882
LIPA Operating Expenses	79,404		90,475	89,308	91,874	1,399	97,138	5,263
Total Operating and Managed Expenses	1,435,978		1,172,532	1,236,651	1,228,405	55,872	1,231,995	3,590
Cash Adjustments								
Other Interest Costs	30,797		29,003	37,972	33,459	4,455	33,596	138
Suffolk Property Tax Settlement (Principal)	(27,715)		(29,100)	(31,059)	(31,881)	(2,780)	(34,818)	(2,938)
Visual Benefits Assessment (Principal)	(1,242)		(581)	(1,019)	(837)	(256)	(838)	(1)
PSEG Long Island OPEB Expenses	(46,837)		(51,522)	(46,413)	(46,460)	5,061	(19,250)	27,210
Total Cash Adjustments	(44,997)		(52,199)	(40,519)	(45,720)	6,480	(21,311)	24,409
Other Income								
Other Income and Deductions	73,309		35,704	59,033	37,447	1,743	31,424	(6,023)
Grant Income	44,687		23,470	23,507	23,192	(278)	23,098	(94)
Total Other Income	117,997		59,174	82,540	60,639	1,466	54,522	(6,117)
Debt Service								
UDSA Debt Service	319,029		367,388	367,388	357,548	(9,841)	402,930	45,383
LIPA Debt Service	255,145		238,280	237,872	235,344	(2,936)	244,101	8,757
Coverage	269,616		219,010	236,574	257,104	38,094	258,635	1,531
Total Debt Service	843,790		824,678	841,834	849,996	25,317	905,666	55,671
Power Supply Charge	1,813,110		1,776,149	2,027,427	1,879,216	103,067	1,873,345	(5,871)
Total Revenue Requirements	\$ 3,929,885		\$ 3,661,987	\$ 3,982,854	\$ 3,851,258	\$ 189,271	\$ 3,935,174	\$ 83,916

Note: (a) PSEG Long Island 2021 Approved Operating and Managed Expenses have been increased by \$4.9 million from \$737.7 million to \$742.6 million due to a budget amendment for Enhanced Vegetation Management and a new Low-to-Moderate Income Heat Pump Program.

Long Island Power Authority
2022 Proposed and 2023 Projected Operating and Capital Budgets

Consolidated Statement of Revenues, Expenses, and Change in Net Position

LIPA's projection of Revenues and Expenses uses the accrual basis of accounting, which results in a Change in Net Position of \$55.2 million in 2022 and \$82.2 million in 2023. Further information on the components of Revenues and Expenses are included on supplemental pages herein.

The factors contributing to the projection of net income include certain non-cash items, such as: amortization of non-cash regulatory assets to expense; non-cash OPEBs for PSEG Long Island (Section II Page 28); other deferred expenses (Section II Page 12); and a change in depreciation rates including an increase in depreciation associated with the early retirement of conventional meters by Smart Meters (Section II Page 12).

Consolidated Statements of Revenues, Expenses, and Changes in Net Position
(Thousands of Dollars)

Description	2020 Actual	2021		2022		2023	
		Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Revenues	\$ 3,929,885	\$ 3,661,987	\$ 3,982,854	\$ 3,851,258	\$ 189,271	\$ 3,935,174	\$ 83,916
Power Supply Charge	1,813,110	1,776,149	2,027,427	1,879,216	103,067	1,873,345	(5,871)
Revenue Net of Power Supply Charge	2,116,775	1,885,837	1,955,427	1,972,041	86,204	2,061,828	89,787
PSEG Long Island Operating and Managed Expenses							
PSEG Long Island Operating Expenses (a)	530,705	555,876	552,735	584,925	29,049	617,839	32,914
PSEG Long Island OPEB Expense (b)	41,567	-	-	-	-	-	-
PSEG Long Island Managed Expenses	451,264	186,685	258,255	207,121	20,436	164,737	(42,383)
Utility Depreciation	248,657	256,145	247,325	289,157	33,013	334,982	45,825
Accelerated Depreciation of Conventional Meters	35,277	34,007	42,854	-	(34,007)	-	-
PILOTS - Revenue-Based Taxes	37,504	36,694	38,474	40,556	3,861	42,437	1,882
PILOTS - Property-Based Taxes	295,534	302,802	297,879	303,929	1,127	309,844	5,915
LIPA Operating Expenses	79,404	90,475	89,308	91,874	1,399	97,138	5,263
LIPA Depreciation and Amortization	137,044	137,489	137,489	138,199	710	138,759	560
Interest Expense	358,995	345,834	357,845	348,388	2,554	355,117	6,728
Total Expenses	2,215,952	1,946,007	2,022,165	2,004,149	58,142	2,060,853	56,703
Other Income and Deductions (c)	73,309	44,562	68,170	46,370	1,808	40,394	(5,976)
Grant Income	44,687	40,241	39,551	40,924	682	40,841	(83)
Change in Net Position	\$ 18,820	\$ 24,633	\$ 40,983	\$ 55,186	\$ 30,552	\$ 82,211	\$ 27,025

Note: (a) PSEG Long Island 2021 Approved Operating Expenses have been increased by \$4.9 million from \$551.0 million to \$555.9 million due to a budget amendment for Enhanced Vegetation Management Program and a new Low-to-Moderate Income Heat Pump Program.
(b) Effective 2021, PSEG Long Island OPEB Expenses are reported under PSEG Long Island Managed Expenses.
(c) 2021 Approved Other Income and Deductions has been increased by \$0.5 million from \$44.1 million to \$44.6 million due to a budget amendment for a new Low-to-Moderate Income Heat Pump Program.

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Sales and Revenues

Revenues are derived primarily from retail sales of electricity to residential and commercial customers. Also included are revenues from electric sales to public authorities and street lighting. In accordance with LIPA's Tariff for Electric Service (the Tariff), LIPA's Delivery Charge recovers the costs associated with maintaining and improving the transmission and distribution system and serving customers. LIPA recovers costs associated with purchasing and producing electric energy (fuel and purchased power) through the Power Supply Charge. LIPA also has various surcharges and non-electric service charges, such as those to recover costs associated with its distributed energy programs, assessments, revenue-related PILOTs, fees for pole attachments, late payment charges to customers whose bills are in arrears, and other miscellaneous service fees.

PSEG Long Island's proposed sales forecast for 2022 projects a 0.5% increase from the approved 2021 Budget. In particular, the continuing economic recovery from the COVID-19 pandemic is expected to result in growth for the commercial sector as employees return to the workplace but will be partially offset by decreased sales for the residential sector.

Sales and Revenues
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Sales of Electricity (MWh)							
Residential Sales	9,567,815	9,159,371	9,652,355	8,830,020	(329,351)	8,327,487	(502,532)
Commercial Sales	8,521,867	8,379,397	8,711,880	8,793,650	414,253	8,795,280	1,630
Other Sales to Public Authorities/Street Lighting	490,796	519,540	484,284	519,540	-	519,540	-
Total Sales of Electricity (MWh)	18,580,479	18,058,308	18,848,519	18,143,210	84,902	17,642,308	(500,903)
Revenues by Sector							
Residential	\$ 2,058,983	\$ 1,978,392	\$ 2,144,344	\$ 2,051,138	\$ 72,746	\$ 2,091,326	\$ 40,187
Commercial	1,568,795	1,628,188	1,715,094	1,802,875	174,688	1,834,864	31,989
Other Public Authorities/Street Lighting	60,464	65,229	61,055	67,800	2,571	68,840	1,040
ESCO Revenue (a)	10,426	5,947	4,976	-	(5,947)	-	-
Other Regulatory Amortizations and Deferrals	214,188	(44,949)	39,930	(100,413)	(55,464)	(91,102)	9,311
Miscellaneous Revenues	17,030	29,180	17,456	29,857	677	31,245	1,388
Total Revenues	\$ 3,929,885	\$ 3,661,987	\$ 3,982,854	\$ 3,851,258	\$ 189,271	\$ 3,935,174	\$ 83,916
Revenues by Component							
Delivery Charge (RDM Target)	\$ 1,389,009	\$ 1,431,928	\$ 1,493,904	\$ 1,509,154	\$ 77,226	\$ 1,577,113	\$ 67,959
Power Supply Charge	1,844,879	1,776,149	1,962,101	1,879,216	103,067	1,873,345	(5,871)
T&D Property Tax (b)	295,534	302,802	297,879	303,929	1,127	309,844	5,915
Energy Efficiency and Distributed Energy (DER)	69,442	61,313	64,223	61,224	(89)	80,753	19,529
New York State Assessment	9,971	10,937	10,477	11,719	782	12,308	589
Suffolk Property Tax Settlement	48,420	48,197	50,156	49,237	1,040	50,300	1,063
Visual Benefits Assessment (VBA)	1,210	1,003	1,260	1,049	47	1,019	(31)
Revenue Related PILOTS	37,504	36,694	38,474	40,556	3,861	42,437	1,882
RDM Collection/(Refund)	(20,962)	(28,751)	(31,404)	(11,108)	17,643	2,715	13,823
DSA Collection/(Refund)	23,661	37,484	38,399	76,838	39,354	45,196	(31,642)
Other Regulatory Amortizations and Deferrals	214,188	(44,949)	39,930	(100,413)	(55,464)	(91,102)	9,311
Miscellaneous Revenues	17,030	29,180	17,456	29,857	677	31,245	1,388
Total Revenues	\$ 3,929,885	\$ 3,661,987	\$ 3,982,854	\$ 3,851,258	\$ 189,271	\$ 3,935,174	\$ 83,916

Note: (a) Beginning in 2022, modifications to the Long Island Choice program will discontinue the Bill Credit Adjustment (BCA) previously charged to ESCOs.

(b) T&D Property Tax is a component of Delivery Charge.

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Power Supply Charge

Power supply charges are budgeted at \$1.88 billion for 2022, an increase of \$103.1 million as compared to the approved Budget for 2021. The increase is mainly attributable to higher projected market energy and commodity costs, which are driven by higher purchased power, gas and oil prices and a modest increase in projected energy sales. The increase is also driven by an increase in NYPA Transmission Adjustment Charges.

Power supply charge projections are prepared utilizing a generation economic dispatch model that considers, among other variables, the availability and efficiency of generating resources, energy and fuel prices, and environmental regulatory requirements.

In addition to the costs for gas and oil consumed in the generation of electricity, power supply charges include the cost of emission allowances, generating unit and transmission cable capacity, costs charged by the New York, New England and PJM independent system operators (ISO), electric power wheeling, Zero Emission Credits, services received under the power supply and fuel management agreements, fuel hedging program costs, economy energy purchases, energy and Renewable Energy Credits from renewable resource as well as LIPA's 18% share of the Nine Mile Point 2 nuclear generating station, the National Grid Power Supply Agreement (PSA), and certain PILOTs.

The budgeted 2022 power supply charges are projected to be \$148.2 million lower than the projected 2021 power supply charges of \$2.03 billion. The decrease is mainly attributable to higher gas and oil costs in 2021 driven by intertie outages and derates, resulting in an increase in on-island generation.

Description	Net Change	Cause
Purchased Power	\$46.4M	Higher prices associated with market energy purchases as well as increase in NYPA Transmission Adjustment Charges (NTAC), partially offset by lower PJM charges.
Commodity (gas & oil)	\$34.2M	Increase mainly due to higher gas and oil prices, partially offset by hedges.
Pass-through Property Taxes	(\$6.3M)	Projected decrease in PSA property taxes related to property tax settlements.
Renewables	\$7.2M	Increase mainly due to higher purchases of Renewable Energy Credits (REC) which is partially offset by expiring Bear Swamp contract.
Regional Greenhouse Gas Initiative (RGGI)	\$15.9M	Increase due to higher projected emission prices.
Zero Emissions Credits	\$8.5M	Increase due to higher projected price of Zero Emission Credits.
Other	(\$2.4M)	Decrease mainly driven by lower Y49 cable costs.
Total	\$103.1M	

Power Supply Charge
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Capacity							
Capacity Charges	\$ 381,908	\$ 377,071	\$ 394,822	\$ 372,398	\$ (4,672)	\$ 368,309	\$ (4,090)
National Grid (PSA)	247,886	258,263	269,376	262,390	4,127	266,185	3,795
Total Capacity	629,795	635,334	664,197	634,788	(546)	634,494	(294)
Purchased Power							
Purchased Power	335,638	445,816	450,306	492,227	46,411	469,878	(22,349)
Total Purchased Power	335,638	445,816	450,306	492,227	46,411	469,878	(22,349)
Commodity							
Natural Gas	290,845	176,725	307,486	195,672	18,947	180,580	(15,092)
Fuel Oil	40,829	20,475	88,178	35,775	15,300	36,145	370
Total Commodity	331,674	197,200	395,665	231,447	34,247	216,724	(14,722)
Renewables							
Renewable Power	116,195	98,836	100,621	106,033	7,197	145,714	39,681
Total Renewables	116,195	98,836	100,621	106,033	7,197	145,714	39,681
Other							
Transmission	39,755	29,842	25,691	25,434	(4,408)	20,105	(5,329)
Nine Mile Nuclear Fuel	39,286	36,914	36,314	38,135	1,221	40,046	1,911
Regional Greenhouse Gas Initiative (RGGI)	29,793	22,561	42,721	38,436	15,875	32,556	(5,881)
Zero Emissions Credits	50,222	50,867	62,337	59,386	8,519	63,808	4,422
Fuel and Power Supply Management Services	19,934	20,453	20,272	20,831	377	21,216	386
Other	6,286	8,105	6,379	8,587	482	9,641	1,054
Total Other	185,277	168,742	193,714	190,808	22,066	187,371	(3,437)
Pass Through Property Taxes							
National Grid (PSA)	203,309	218,430	211,484	211,846	(6,584)	206,889	(4,957)
Fast Track Units	6,912	6,945	6,983	7,174	230	7,382	208
Nine Mile	4,311	4,846	4,458	4,893	47	4,893	0
Total Pass Through Property Taxes	214,531	230,221	222,924	223,914	(6,307)	219,164	(4,749)
Total Power Supply Charge	\$ 1,813,110	\$ 1,776,149	\$ 2,027,427	\$ 1,879,216	\$ 103,067	\$ 1,873,345	\$ (5,871)

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Operating Expenses

Total Operating Expenses are budgeted at \$883.9 million in 2022 and projected at \$879.7 million in 2023.

Operating Expenses are costs associated with operating and maintaining LIPA's Transmission and Distribution system and consist of three major expense categories:

- (i) PSEG Long Island Operating Expenses (expenses which PSEG Long Island must remain within 102% of budget to earn variable compensation);
- (ii) PSEG Long Island Managed Expenses (expenses which PSEG Long Island manages but are substantially outside of its control); and
- (iii) LIPA's Operating Expenses.

PSEG Long Island Operating Expenses include costs related to the following major areas: Transmission and Distribution, Customer Services, Business Services, Power Markets and Energy Efficiency Programs. PSEG Long Island Operating Expenses for 2022 and 2023 include inflationary increase as well as costs related to initiatives to enhance customer satisfaction, system resiliency and reliability, and clean energy and energy efficiency for customers.

PSEG Long Island Managed Expenses include costs related to New York State assessments, uncollectible accounts, pensions and OPEB costs, and storm preparation and restoration. The 2022 budget for uncollectible accounts decreased from 2021 due to a favorable outlook in the economic recovery related to the COVID-19 pandemic, as well as the resumption of collection activities as a result of the expiration of the customer shut off moratorium. The budget for storm preparation and restoration costs increases to \$74.5 million for 2022 and to \$79.0 million for 2023 to align with the historical five-year average of storm expenses.

LIPA Operating Expenses includes the PSEG Long Island management fee and costs related to LIPA staff and outside professional services, as detailed on Section II Page 30.

Operating Expenses
(Thousands of Dollars)

Description		2020	2021		2022		2023	
		Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
PSEG Long Island Operating Expenses	(a)(b)	\$ 530,705	\$ 555,876	\$ 552,735	\$ 584,925	\$ 29,049	\$ 617,839	\$ 32,914
PSEG Long Island Managed Expenses								
Uncollectible Accounts		29,164	30,362	31,519	28,760	(1,602)	27,113	(1,647)
Storm Restoration	(c)	389,330	70,000	146,453	74,500	4,500	79,000	4,500
NYS Assessment		9,971	10,937	10,477	11,719	782	12,308	589
Accretion of Asset Retirement Obligation		2,398	2,588	2,953	3,706	1,118	3,929	223
Pension (PSEG Operating Expenses)	(b)	19,566	24,304	22,885	18,407	(5,897)	15,440	(2,967)
OPEB (PSEG Operating Expenses)	(b)	41,567	48,307	43,845	42,993	(5,313)	26,721	(16,272)
Pending Operating Expense Authorization	(d)	-	-	-	26,809	26,809	-	(26,809)
Miscellaneous		835	188	123	227	39	227	-
Total PSEG Long Island Managed Expenses		492,831	186,685	258,255	207,121	20,436	164,737	(42,383)
Total PSEG Long Island Operating and Managed Expenses		1,023,536	742,561	810,990	792,046	49,485	782,576	(9,470)
LIPA Operating Expenses								
Management Fee (including Variable Compensation)		76,920	78,458	78,458	73,750	(4,708)	75,318	1,568
Capitalized Management Fee		(30,055)	(31,007)	(31,007)	(28,496)	2,511	(29,102)	(606)
LIPA Operating Costs		32,539	43,025	41,857	46,621	3,596	50,922	4,301
LIPA Operating Expenses		79,404	90,475	89,308	91,874	1,399	97,138	5,263
Total PSEG Long Island & LIPA Operating Expenses		\$ 1,102,940	\$ 833,036	\$ 900,298	\$ 883,920	\$ 50,884	\$ 879,714	\$ (4,206)

Note: (a) PSEG Long Island 2021 Approved Operating Expenses have been increased by \$4.9 million from \$551.0 million to \$555.9 million due to a budget amendment for Enhanced Vegetation Management and a new Low-to-Moderate Income Heat Pump Program.

(b) Pension and Other Post Employment Benefits (OPEB) have been shifted from PSEG Long Island Operating Expenses to Managed Expenses starting 2021 due to the impact of actuarial valuation changes and market and interest rate volatility on such expenses.

(c) Storm Restoration cost for 2020 is the full amount of \$389.3 million and LIPA anticipates a FEMA grant for Tropical Storm Isaias of \$231.6 million.

(d) Pending Operating Expense Authorization are budgeted resources held outside the PSEG Long Island Budget pending the submission by PSEG Long Island of enhanced information on related initiatives.

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Depreciation and Amortization Expenses

Depreciation and Amortization Expenses are budgeted at \$427.4 million in 2022 and projected at \$473.7 million in 2023.

PSEG Long Island Managed Utility Depreciation consists of depreciation of transmission and distribution plant, information technology, and FEMA storm hardened assets.

The budgeted utility depreciation for 2022 reflects a decrease of \$(1.0M) primarily driven by the completion of the accelerated depreciation of conventional meters in 2021. The projected increase in 2023 of \$45.8M results from new capital spend adding to the depreciable asset base.

LIPA Depreciation and Amortization consists primarily of the amortization of the Acquisition Adjustment at \$111.4 million annually. The Acquisition Adjustment is an intangible asset resulting from the merger with the Long Island Lighting Company in 1998. Also included is the amortization of certain regulatory assets related to pension and OPEB expenses for the former National Grid and current PSEG Long Island employees that directly served LIPA's customers. These retirement benefit expenses are a contractual obligation of LIPA and are being amortized to align to the remaining life of the contract. See LIPA's audited financial statements for more information.

Depreciation and Amortization Expenses
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
PSEG Long Island Managed Utility Depreciation	\$ 235,086	\$ 237,509	\$ 229,498	\$ 269,455	\$ 31,946	\$ 315,267	\$ 45,812
Accelerated Depreciation of Conventional Meters	35,277	34,007	42,854	-	(34,007)	-	-
Depreciation Expense Related to FEMA Capital Projects	13,571	18,635	17,827	19,702	1,067	19,714	13
Total PSEG Long Island Managed Utility Depreciation	283,934	290,151	290,179	289,157	(994)	334,982	45,825
LIPA Depreciation and Amortization							
Amortization of Acquisition Adjustment	111,375	111,375	111,375	111,375	-	111,375	-
Amortization of OPEB & Pension Deferrals	25,014	25,014	25,014	25,014	-	25,014	-
Depreciation - LIPA	655	1,100	1,100	1,810	710	2,370	560
Total LIPA Depreciation and Amortization	137,044	137,489	137,489	138,199	710	138,759	560
Total Depreciation and Amortization Expenses	\$ 420,978	\$ 427,641	\$ 427,668	\$ 427,357	\$ (284)	\$ 473,741	\$ 46,385

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Taxes, Payments-in-Lieu of Taxes and Assessments

Payments-In-Lieu of Taxes (PILOTs) and Assessments are budgeted at \$711.0 million in 2022 and projected at \$717.1 million in 2023.

Revenue-based PILOTs are calculated using gross revenues received from the sale of electricity and other sources of revenue and are subject to true up to actual cost through a PILOT payments recovery rider.

Additionally, LIPA incurs property-based taxes and PILOTs associated with generating assets. These costs, as with all power supply costs, are reconciled to actual costs. National Grid Power Supply Agreement (PSA) related taxes are budgeted at \$211.8 million in 2022 and projected at \$206.9 million in 2023. In 2018, LIPA concluded a property tax settlement with the Village of Port Jefferson and the Town of Brookhaven. In 2020, LIPA reached a property tax settlement with the Town of Huntington and the Northport - East Northport school district. LIPA continues to challenge other property tax assessments on the PSA generation units, which are significantly over-assessed. LIPA has also exercised its right to ramp down two National Grid units that fall under the PSA. This will result in reduction in property taxes in future years.

The property-based PILOTs related to the Fast Track Units are budgeted at \$7.2 million in 2022.

As LIPA owns 18% of the Nine Mile Point 2 nuclear power plant, it is also responsible for paying a share of the property taxes. LIPA's share of these taxes are budgeted at approximately \$4.9 million in 2022.

The New York State Assessment recovers costs related to Department of Public Service oversight of LIPA and PSEG Long Island's operations. This cost is \$11.7 million in 2022.

LIPA collects sales taxes on behalf of local municipalities. Those taxes are estimated at \$130.7 million in 2022 and \$133.1 million in 2023.

Taxes, Payments-in-Lieu of Taxes and Assessments
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
PILOTs - Revenue-Based Taxes	\$ 37,504	\$ 36,694	\$ 38,474	\$ 40,556	\$ 3,861	\$ 42,437	\$ 1,882
PILOTs - Property-Based Taxes	295,534	302,802	297,879	303,929	1,127	309,844	5,915
Property Taxes in Power Supply Charge							
National Grid (PSA) Property Taxes	203,309	218,430	211,484	211,846	(6,584)	206,889	(4,957)
Fast Track Units	6,912	6,945	6,983	7,174	230	7,382	208
Nine Mile PILOTs	4,311	4,846	4,458	4,893	47	4,893	0
Total Property Taxes in Power Supply Charge	214,531	230,221	222,924	223,914	(6,307)	219,164	(4,749)
Other Taxes and Assessments							
New York State Assessment	9,971	10,937	10,477	11,719	782	12,308	589
New York State Office of Real Property Services	188	188	227	227	39	227	-
Total Other Taxes and Assessments	10,158	11,125	10,704	11,945	821	12,534	589
Total Taxes and Assessments Before Sales Taxes	557,728	580,841	569,981	580,343	(498)	583,980	3,636
Sales Taxes (a)	119,398	120,840	127,217	130,670	9,829	133,109	2,439
Total PILOTs, Sales, State and Local Taxes and Assessments	\$ 677,126	\$ 701,682	\$ 697,198	\$ 711,013	\$ 9,331	\$ 717,089	\$ 6,076

Note: (a) Sales tax revenue is collected by LIPA in accordance with local municipal law. Sales taxes are recorded as liabilities by LIPA as they are collected on behalf of and transferred to local government jurisdictions.

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Other Income and Deductions

Other Income and Deductions are budgeted at \$46.4 million for 2022 and projected at \$40.4 million for 2023. The 2022 budget includes a settlement of \$4.0 million from the Attorney General related to the new Low-to-Moderate Income Heat Pump Program. The decrease is based on lower earnings on investments due to lower interest rates.

Other Income and Deductions consists of income and interest generated from LIPA's short-term investments, including the Rate Stabilization Fund and the Construction Fund, earnings on the Nine Mile Point 2 nuclear decommissioning trust fund, earnings on the OPEB Account, carrying charges accrued on deferred balances related to the Suffolk Property Tax Settlement, and miscellaneous sources of revenues and expenses, such as income from certain customer-requested work not included in electric rates.

Projected interest rates on short-term investments are updated to prevailing interest rates annually as part of the budget process and differences between projected and actual interest rates are reconciled annually through the Delivery Service Adjustment.

Other Income and Deductions
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Short-Term Investment Income	\$ 10,440	\$ 10,689	\$ 2,025	\$ 3,757	\$ (6,932)	\$ 3,757	\$ -
Interest Income from:							
Suffolk Property Tax Settlement	20,706	19,097	19,097	17,357	(1,740)	15,482	(1,875)
Visual Benefits Assessment	(31)	422	242	212	(210)	180	(32)
OPEB Account	26,295	1,687	9,690	8,987	7,300	8,987	-
PSEG Long Island Funding Accounts	739	1,156	869	1,156	-	1,156	-
Miscellaneous Income and Deductions - LIPA (a)(b)	4,080	553	24,703	4,075	3,522	75	(4,000)
Miscellaneous Income and Deductions - PSEG Long Island	3,340	2,101	2,408	1,904	(197)	1,788	(116)
Subtotal Other Income and Deductions	\$ 65,568	\$ 35,704	\$ 59,033	\$ 37,447	\$ 1,743	\$ 31,424	\$ (6,023)
Nuclear Decommissioning Trust Fund	7,741	8,858	9,137	8,923	65	8,970	47
Total Other Income and Deductions	\$ 73,309	\$ 44,562	\$ 68,170	\$ 46,370	\$ 1,808	\$ 40,394	\$ (5,976)

Note: (a) 2021 Approved Other Income and Deductions has been increased by \$0.5 million from \$44.1 million to \$44.6 million due to a budget amendment for a new Low-to-Moderate Income Heat Pump Program.

(b) The Miscellaneous Income and Deduction - LIPA projected 2021 included the recognition of the non-cash gain recognized on the termination of the basis swaps coupled with favorable mark-to-market adjustments.

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Grant Income

In 2022, Grant Income consists primarily of (i) a grant of \$20.0 million from NYSERDA from Regional Greenhouse Gas Initiative (RGGI) funds to support PSEG Long Island's energy efficiency programs, (ii) subsidy payments totaling \$3.2 million from the United States Treasury equal to approximately 33% of the interest on LIPA's debt issued as Build America Bonds.

LIPA pays for RGGI allowances as part of its Power Supply Charge. This RGGI grant represents the return of a portion of those funds to support energy efficiency programs on Long Island.

In February 2014, LIPA signed a Letter of Undertaking with FEMA that provides for \$730.0 million of grant funding for storm hardening measures. To better reflect the nature of this grant it is being amortized to Grant Income in an amount equal to the depreciation expense incurred as a result of the storm hardening program. This amortization is estimated at \$17.7 million in 2022 and in 2023.

Grant Income
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Build America Bonds Subsidy - U.S. Treasury	\$ 3,726	\$ 3,470	\$ 3,507	\$ 3,192	\$ (278)	\$ 3,098	\$ (94)
Efficiency & DER - RGGI Funding	25,000	20,000	20,000	20,000	-	20,000	-
Other Grant Income	3,747	-	-	-	-	-	-
Subtotal Grant Income	32,474	23,470	23,507	23,192	(278)	23,098	(94)
Amortization of Deferred FEMA Grant	12,214	16,772	16,044	17,732	960	17,743	11
Total Grant Income	\$ 44,687	\$ 40,241	\$ 39,551	\$ 40,924	\$ 682	\$ 40,841	\$ (83)

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Interest Expense

Interest expense is budgeted at \$348.4 million in 2022 and projected at \$355.1 million in 2023. The budget is based on forecasted levels of outstanding debt, associated fees, and the amortization of previously deferred debt-related charges and credits. Actual interest rates on variable rate debt are updated to prevailing interest rates each year as part of the annual budget process and differences between projected and actual interest rates are reconciled annually through the Delivery Service Adjustment ensuring customers pay only actual costs.

Interest expense reflects the accrual of interest on outstanding debt in the calendar year. It can differ from interest payments made to bondholders with respect to timing, but the actual amounts will be the same over the life of the bonds.

LIPA recognizes the full value of bond issuance costs in the year of the bond sale, instead of amortizing the costs over the life of the bond.

Interest Expense
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Accrued Interest Expense on Debt Securities	\$ 369,797	\$ 373,004	\$ 366,132	\$ 369,547	\$ (3,457)	\$ 380,140	\$ 10,594
Amortization of Premium	(66,125)	(71,405)	(71,734)	(75,929)	(4,524)	(78,742)	(2,814)
Interest Expense on Debt Securities (Accrued)	303,672	301,599	294,398	293,618	(7,981)	301,398	7,780
Other Interest Expense							
Amortization of Deferred Debt Issuance Costs	2,905	2,724	2,703	2,470	(254)	2,312	(158)
Amortization of Deferred Defeasance Costs	25,651	15,912	23,839	20,279	4,367	19,080	(1,199)
Other Interest Amortizations	(6,988)	(6,990)	(6,173)	(5,836)	1,155	(5,896)	(60)
Bond Issuance Costs	2,958	3,586	5,105	4,398	812	4,626	228
Other Interest Amortizations (Accrued)	24,527	15,232	25,475	21,312	6,080	20,122	(1,189)
Interest Rate Swap Payments	23,372	23,011	30,684	26,478	3,467	26,478	-
Letter of Credit and Remarketing Fees	6,245	4,246	5,856	5,515	1,269	5,515	-
Interest on Customer Security Deposits	62	11	86	86	75	189	103
Bond Administration Costs and Bank Fees	1,118	1,735	1,346	1,379	(356)	1,414	34
Other Interest Costs (Cash)	30,797	29,003	37,972	33,459	4,455	33,596	138
Total Interest Expense	\$ 358,995	\$ 345,834	\$ 357,845	\$ 348,388	\$ 2,554	\$ 355,117	\$ 6,728

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Debt Service Requirements

Debt service consists of principal and interest payments due to bondholders. Debt service payments are reported separately for LIPA debt and UDSA debt. LIPA refinanced debt through the UDSA, resulting in a net present value savings of \$492.0 million to customers.

Consistent with the Public Power Model, LIPA also recovers “fixed obligation coverage.” Fixed obligation coverage is the portion of LIPA’s capital program funded by cash flow in each year rather than by new borrowings. Fixed obligation coverage is a ratio based on LIPA’s annual debt service payments plus the imputed payments associated with long-term obligations such as power supply contracts and office and vehicle leases.

The LIPA’s Board financial policy includes several components:

- (i) **Mid-A Ratings Target:** LIPA’s bond rating is A2 (stable), A (stable) and A (positive) (Moody’s, S&P, and Fitch, respectively). LIPA’s target is to maintain or improve these ratings.
- (ii) **Borrow Less than 64% of Capital Spending:** LIPA targets to borrow less than 64% of capital spending on a rolling average basis with the balance funded by cash flow. This level is typical for large public power utilities and an industry best practice.
- (iii) **Fixed Obligation Coverage Target:** LIPA’s Fixed Obligation Coverage Ratio was revised in 2020 to reflect the impact of a new Governmental Accounting Standards Board (GASB) Statement No. 87 - Leases. This new standard expanded the definition of a lease. Since leases are a component in the Fixed Obligation Coverage Ratio, to ensure that the updated value of leases results in the same level of cash flow as the prior lease standard, the coverage ratio was reduced from 1.45x to 1.35x starting in 2020. The coverage ratio remained at 1.35x in 2021 and is proposed to increase to 1.40x in 2022 to reduce borrowing pursuant to the Board’s 2020 financial policy review.

LIPA has taken steps to minimize debt service costs in 2022 by refinancing and defeasing debt, generating significant saving for customers.

Debt Service Requirements
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
UDSA Debt Service							
UDSA Debt Service	\$ 319,029	\$ 367,388	\$ 367,388	\$ 357,548	\$ (9,841)	\$ 402,930	\$ 45,383
Board Policy Target Coverage Ratio on UDSA Debt Service	1.00 x	1.00 x	1.00 x	1.00 x		1.00 x	
UDSA Debt Service Plus Coverage	319,029	367,388	367,388	357,548	(9,841)	402,930	45,383
LIPA Debt Service							
LIPA Debt Service on Fixed Rate Debt	234,017	217,172	219,826	226,831	9,660	233,633	6,801
LIPA Debt Service on Variable Rate Debt (a)	21,128	21,108	18,047	8,513	(12,595)	10,468	1,956
Total LIPA Debt Service	255,145	238,280	237,872	235,344	(2,936)	244,101	8,757
Board Policy Target Coverage Ratio on LIPA Debt Service	1.35 x	1.35 x	1.35 x	1.40 x		1.40 x	
LIPA Debt Service Plus Coverage	344,446	321,678	319,988	329,482	7,804	341,742	12,260
LIPA Lease Obligations							
LIPA Lease Obligations	420,664	400,035	407,961	407,415	7,380	402,487	(4,928)
Board Policy Target Coverage Ratio on LIPA Lease Obligations	0.35 x	0.35 x	0.35 x	0.40 x		0.40 x	
LIPA Long-term Obligations Coverage	147,232	140,012	140,833	162,966	22,954	160,995	(1,971)
Revenue Net of Requirements							
Adjustment to Coverage Due to Revenue Net of Requirements (b)		(4,400)	13,625	-	4,400	-	-
Total Debt Service and Coverage	\$ 810,708	\$ 824,678	\$ 841,834	\$ 849,996	\$ 25,317	\$ 905,666	\$ 55,671
Total Projected Debt Service and Coverage							
Total Projected Debt Service	574,174	605,668	605,261	592,892	(12,776)	647,031	54,139
Total Coverage	269,616	219,010	236,574	257,104	38,094	258,635	1,531
Projected Coverage Ratio on LIPA Obligations	1.40 x	1.34 x	1.37 x	1.40 x		1.40 x	
Projected Coverage on LIPA & UDSA Obligations	1.27 x	1.22 x	1.23 x	1.26 x		1.25 x	

Note: (a) LIPA Debt Service on Variable Rate Debt is projected to decrease based on a lower outstanding balance of variable rate debt than assumed in the prior year.

(b) Adjustment to 2021 Coverage reflects the impacts of the approved budget amendments by \$4.4 million for Enhanced Vegetation Management Program.

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Capital Expenditures

Capital Expenditures are budgeted at \$759.9 million in 2022 and are projected at \$782.6 million in 2023.

Transmission and Distribution projects are prioritized using a Value and Risk Evaluation protocol. The projects will improve system reliability and resiliency, and meet load and regulatory requirements. The continuation of the Storm Hardening Distribution Circuit Program and the Multiple Customer Outage Program will continue to address customers with poor reliability.

Information Technology (IT) projects include continued investments in operations areas, outage management systems, and replacement of end of life technologies. In 2023, planned IT Capital Expenditures represent investments in business transformation and application upgrades in Customer Information and Billing, Finance, Human Resources, and Work and Asset Management areas.

Nine Mile Point 2 Capital Expenditures relates to LIPA's share of capital expenses for the NMP2 nuclear generating station.

The Percent of Capital Expenditures Funded from Debt will exceed LIPA's target of 64% in 2022 and 2023. LIPA projects the percentage of Capital Expenditures Funded from Debt will decrease steadily over the next few years, achieving the Board target by 2025. This is due to the need to increase Capital investments to meet Board priorities. LIPA is increasing investments in Transmission and Distribution Reliability by \$51.4 million and maintaining Storm Hardening investments at \$70.0 million. In addition, LIPA will increase investments in Information Technology systems by \$23.0 million in 2022. To mitigate the impact of the increased Capital spending, LIPA is increasing the Coverage Ratio from 1.35x to 1.40x, which results in an additional \$38.1 million in operating revenue being generated to fund the Capital investments. LIPA will continue to monitor its debt financing as a percentage of Capital expenditures and adjust its financial policy, if warranted.

Capital Expenditures
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Transmission and Distribution							
Regulatory Driven	\$ 56,408	\$ 6,000	\$ (2,698)	\$ -	\$ (6,000)	\$ -	\$ -
Load Growth	215,648	214,349	183,980	178,268	(36,082)	171,680	(6,588)
Reliability	170,361	196,212	223,766	247,668	51,456	272,518	24,850
Storm Hardening	54,097	70,000	84,401	70,000	-	70,000	-
Economic, Salvage, Tools, Equipment & Other (a)	50,692	54,973	49,881	60,229	5,256	69,182	8,953
Total Transmission and Distribution Projects	547,207	541,534	539,330	556,165	14,631	583,380	27,215
Other PSEG Long Island Capital Expenditures							
Information Technology	31,353	49,647	63,814	72,647	23,000	74,675	2,028
Customer Operations	25,225	17,282	14,352	9,983	(7,298)	12,410	2,426
Other General Plant	3,793	11,517	5,024	3,072	(8,445)	4,071	1,000
Fleet	8,708	9,719	517	7,222	(2,497)	22,550	15,328
Utility 2.0	70,674	95,739	74,897	40,013	(55,725)	29,957	(10,056)
Pending Project Authorization (b)	-	-	-	(59,400)	(59,400)	-	59,400
Total PSEG Long Island Excluding FEMA	686,960	725,437	697,936	629,702	(95,735)	727,043	97,340
FEMA Storm Hardening	44,842	24,414	20,804	2,690	(21,725)	-	(2,690)
Storm Capitalization	21,503	4,468	2,223	4,755	287	5,043	287
Total PSEG Long Island Capital	753,305	754,320	720,963	637,147	(117,172)	732,085	94,938
Nine Mile Point 2	14,066	6,910	4,184	27,267	20,357	3,921	(23,346)
Property Acquisition and Development	-	12,000	-	11,000	(1,000)	5,000	(6,000)
LIPA - Other	2,751	6,500	6,500	11,850	5,350	12,443	593
Pending Project Authorization (b)	-	-	-	59,400	59,400	-	(59,400)
Capital OPEB Adjustment (c)	(17,715)	(19,711)	(19,355)	(15,290)	4,421	-	15,290
Capitalized Management Fee	30,055	31,007	31,007	28,496	(2,511)	29,102	606
Total Capital Expenditures	\$ 782,462	\$ 791,026	\$ 743,299	\$ 759,871	\$ (31,155)	\$ 782,551	\$ 22,681
Funding for Capital Expenditures							
FEMA Contribution (90% of Project Costs) (d)		\$ 21,973	\$ 18,724	\$ 2,421	\$ (19,552)	\$ -	\$ (2,421)
Coverage from Operating Revenue							
Total Coverage		219,010	236,574	257,104	38,094	258,635	1,531
Less Amount Projected for O&M OPEB Funding (e)		(31,080)	(31,080)	(33,494)	(2,414)	(19,157)	14,337
Funding Required from New Debt		581,123	519,082	533,840	(47,283)	543,073	9,233
Total Funding for Capital Expenditures		\$ 791,026	\$ 743,299	\$ 759,871	\$ (31,155)	\$ 782,551	\$ 22,681

Note: (a) The Approved 2021 Economic, Salvage, Tools, Equipment & Other budget of \$55.0 million has been increased from \$27.8 million to reflect LIPA's budget amendment of \$27.1 million for the purchase of Garden City property.

(b) Pending Project Authorization are budgeted resources held outside the PSEG Long Island Budget pending the submission by PSEG Long Island of a comprehensive scope.

(c) Non Cash cost of Other Post Employment Benefits (OPEB) included in capital expenses above.

(d) Amounts not yet reimbursed by FEMA; pending completion of individual projects.

(e) Projected 2022 OPEB funding is \$47.5 million, of which \$14.0 million is allocated to Capital and \$33.5 million to O&M.

Capital Expenditures
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Percent of Capital Funded from Debt:							
LIPA Target		64%		64%		64%	
Projected Percent of Capital Funded from Debt		73%	70%	70%		69%	
Reconciliation of Utility 2.0							
Utility 2.0 2018 Filing	68,660	80,001	73,818	24,918	(55,083)	3,244	(21,674)
Utility 2.0 2019 Filing	2,014	1,906	507	113	(1,794)	978	865
Utility 2.0 2020 Filing	-	13,831	573	4,566	(9,265)	4,374	(192)
Utility 2.0 2021 Filing	-	-	-	10,417	10,417	16,361	5,944
New Program Funding	-	-	-	-	-	5,000	5,000
Total Utility 2.0	\$ 70,674	\$ 95,739	\$ 74,897	\$ 40,013	\$ (55,725)	\$ 29,957	\$ (10,056)

Major Projects

(Projects with a total cost greater than \$25 million)

Description	Justification	In Service Date	Cash Flow (\$millions)				
			Project To Date Expenditures through 12/31/21	2022	2023	2024 and Beyond	Total Project Cost
Round Swamp Substation: Construct new 69/13kV substation	Load growth in Old Bethpage	2022	\$ 18.3	\$ 9.4	\$ -	\$ -	\$ 27.7
Utility 2.0 Smart Meters: Replace existing meters with Smart Meters	Improve operations, especially with regard to minimizing the impact of outages, and to gain valuable insight into system conditions and customer needs	2022	\$ 178.5	\$ 10.2	\$ -	\$ -	\$ 188.7
Far Rockaway: Install new 33 kV circuit to Arverne Substation	Load growth in Far Rockaway	2022	\$ 7.9	\$ 14.3	\$ 8.9	\$ -	\$ 31.2
Rockaway Beach: Install new 33 kV circuit to Arverne Substation	Load growth in the Rockaway peninsula	2023	\$ 6.8	\$ 8.0	\$ 11.3	\$ 10.8	\$ 36.9
East Garden City: Switchgear replacement	Replace aging switchgears for improved reliability in East Garden City	2024	\$ 3.1	\$ 16.6	\$ 12.3	\$ 17.0	\$ 49.0
North Bellmore: Install 33 MVA bank, switchgear, and feeders	Reduce highly loaded feeders and banks at North Bellmore. Support single bank Roosevelt Substation and Greenfield Substation	2024	\$ 0.4	\$ 3.8	\$ 16.5	\$ 8.1	\$ 28.8
Navy Rd: Construct new 23/13 kV substation	Load growth in Montauk	2023	\$ 27.5	\$ 2.3	\$ 0.3	\$ 0.6	\$ 30.8
Massapequa: Establish new 69/13kV substation	Load growth in the town of Massapequa	2023	\$ 7.7	\$ 11.5	\$ 13.8	\$ -	\$ 33.0
Flowerfield - Terryville: Install new 69 kV cable to Flowerfield	Part of NYISO Class Year 2017. Increase in renewable generation deliverability	2023	\$ 2.0	\$ 21.5	\$ 29.0	\$ -	\$ 52.5
Belmont: Convert substation from 33 kV to 69 kV	Support continued expansion of the Belmont Arena complex	2024	\$ -	\$ 7.0	\$ 30.0	\$ 35.9	\$ 72.9
Transmission Operations Control Room Facility Replacement: Replace the existing Transmission Operations control room	Construct a new Transmission Control room to meet future expansion of the LIPA T&D system as well as continue to maintain a high level of system reliability	2026	\$ -	\$ 10.9	\$ 15.3	\$ 78.2	\$ 104.5
Fire Island Pines: Install new 23 kV circuit to Ocean Beach	Increase reliability to Fire Island	2024	\$ 2.5	\$ 1.1	\$ 21.4	\$ 21.2	\$ 46.1
Smithtown: Storm Hardening	Load pocket with significant transmission outages during last 3 major storms (Irene, Sandy, Isaias)	2024	\$ -	\$ -	\$ 1.0	\$ 33.1	\$ 34.1
Bridgehampton - Buell: Install a new 69kV underground cable	Load growth in the South Fork	2025	\$ 3.6	\$ 1.1	\$ 0.9	\$ 39.9	\$ 45.5
Elwood: Install new distribution bank and switchgear	Load growth in the Elwood area	2025	\$ -	\$ 0.2	\$ 3.7	\$ 28.4	\$ 32.3
Customer Accounting System (CAS) Replacement for LI	Upgrade end of life CAS system	2025	\$ -	\$ -	\$ 20.0	\$ 60.0	\$ 80.0
Enterprise Resource Planning Replacement (HR + Finance)	Upgrade end of life ERP system	2025	\$ -	\$ -	\$ 8.0	\$ 20.0	\$ 28.0
Enterprise Asset Management System (EAMS)	Upgrade end of life Work and Asset Management system	2025	\$ -	\$ -	\$ 8.0	\$ 22.0	\$ 30.0
North Bellport: Eastport 23kV conversion	Reliability improvement for this load pocket with significant transmission outages during last 3 major storms (Irene, Sandy, Isaias)	2026	\$ -	\$ -	\$ 0.1	\$ 26.3	\$ 26.4
Southampton: Install new 138kV cable to Deerfield	Increase in projected South Fork load requirements	2028	\$ 0.1	\$ 3.3	\$ 2.1	\$ 137.0	\$ 142.4
Total Major Projects			\$ 258.6	\$ 121.2	\$ 202.5	\$ 538.7	\$ 1,121.0

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

PSEG Long Island Operating Expenses

PSEG Long Island Operating Expenses are related to five major areas: Transmission and Distribution, Customer Services, Business Services (including IT), Power Markets and Energy Efficiency and Distributed Energy Programs. Total operating expenses are budgeted at \$611.7 million for 2022 and projected at \$617.8 million for 2023. Pension and OPEB expenses are excluded from the operating costs.

The PSEG Long Island 2022 operating budget, excluding the Utility 2.0 Program as well as the Enhanced Vegetation Management Program amendment, is increasing by \$59.2 million. This is driven by inflationary increases of \$14.4 million and several new initiatives of \$47.2 million, which are primarily to enhance customer satisfaction, system resiliency and reliability, and clean energy and energy efficiency, which are partially offset by productivity savings of \$2.4 million. The following are some of the main drivers of the new initiatives:

- Enhanced Vegetation Management Program - \$14.9 million
- Information Technology Enhancements and Improvements - \$6.9 million
- Low-to-Moderate Income Heat Pump Program - \$4.0 million
- Customer Outreach and Satisfaction - \$2.1 million
- Asset Health and Inventory Program - \$2.0 million

Approximately \$26.8 million are budgeted resources held outside the PSEG Long Island Budget pending the submission by PSEG Long Island of enhanced information on related initiatives.

PSEG Long Island Operating Expenses
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
PSEG Long Island Operating Expenses							
Transmission & Distribution	\$ 182,579	\$ 169,871	\$ 180,588	\$ 193,024	\$ 23,153	\$ 196,722	\$ 3,698
Customer Services	108,041	109,840	109,723	116,271	6,431	119,178	2,907
Business Services	146,969	158,310	162,079	179,609	21,299	184,100	4,490
Power Markets	9,647	12,956	11,141	15,645	2,689	16,036	391
Energy Efficiency & DER	81,961	87,243	80,416	92,833	5,590	95,154	2,321
Utility 2.0 Costs	8,108	24,208	15,340	27,973	3,765	23,833	(4,140)
Utility 2.0 Savings	(6,599)	(11,452)	(11,452)	(13,622)	(2,170)	(17,184)	(3,562)
Budget Amendment (a)	-	4,900	4,900	-	(4,900)	-	-
Pending Operating Expense Project Authorization Funds (b)	-	-	-	(26,809)	(26,809)	-	26,809
Total PSEG Long Island Operating Expenses	(a)(c) \$ 530,705	\$ 555,876	\$ 552,735	\$ 584,925	\$ 29,049	\$ 617,839	\$ 32,914

Note: (a) PSEG Long Island 2021 Approved Operating Expenses have been increased by \$4.9 million from \$551.0 million to \$555.9 million due to a budget amendment for Enhanced Vegetation Management and a new Low-to-Moderate Income Heat Pump Program.

(b) Pending Operating Expense Project Authorization Funds are budgeted resources held outside the PSEG Long Island Budget pending the submission by PSEG Long Island of enhanced information on related initiatives.

(c) PSEG Long Island Operating expenses for 2022 may shift between the various lines of business based on potential organizational structure modifications.

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

LIPA Operating Expenses

LIPA Operating Expenses are budgeted at \$91.9 million in 2022 and projected at \$97.1 million in 2023. The 2022 plan represents an increase of \$1.4 million as compared with the Approved Budget for 2021. The increase is largely driven by additional IT related consulting costs to support an increase in oversight functions during major IT deployments.

LIPA Operating Expenses include the PSEG Long Island management fee, costs related to LIPA staff and outside professional services.

LIPA Operating Expenses
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
LIPA Operating Expenses							
PSEG Long Island Management Fee	\$ 76,920	\$ 78,458	\$ 78,458	\$ 73,750	\$ (4,708)	\$ 75,318	\$ 1,568
Capitalized Management Fee	(30,055)	(31,007)	(31,007)	(28,496)	2,511	(29,102)	(606)
Total Operating Management Fee	46,865	47,451	47,451	45,254	(2,197)	46,216	962
LIPA Operating Expenses							
Employee Salaries & Benefits Expenses	11,939	15,043	14,651	16,308	1,264	17,939	1,631
Insurance	2,492	3,289	2,826	3,109	(180)	3,265	155
Office Rent	1,740	1,740	1,720	1,726	(14)	1,813	86
Other	1,670	1,470	1,371	329	(1,141)	1,501	1,171
Total Labor, General and Administrative	17,841	21,543	20,568	21,473	(70)	24,517	3,044
Engineering	1,757	950	987	1,050	100	1,103	53
Legal	5,491	6,280	5,650	5,990	(290)	6,290	300
Financial Services and Cash Management	1,635	2,483	2,129	2,176	(307)	2,285	109
Accounting Services	1,351	3,199	2,924	3,094	(105)	3,249	155
Information Technology	3,421	5,586	6,690	9,606	4,020	10,087	480
Risk Management	181	340	367	357	17	375	18
Grant Administration	211	200	451	260	60	273	13
Outside Services	650	2,444	2,091	2,615	171	2,746	131
Total Professional Services	14,699	21,482	21,290	25,148	3,666	26,406	1,257
Total LIPA Operating Expenses	\$ 79,404	\$ 90,475	\$ 89,308	\$ 91,874	\$ 1,399	\$ 97,138	\$ 5,263

Utility Debt Securitization Authority
(A Component Unit of the Long Island Power Authority)
2021 Approved and 2022 Projected Operating and Capital Budgets

Utility Debt Securitization Authority

The LIPA Reform Act, as amended, created the Utility Debt Securitization Authority (UDSA) to issue restructuring bonds in an aggregate amount not to exceed \$8.0 billion to refinance LIPA's debt at a lower cost and fund storm hardening and modernizing.

LIPA's Board adopted Financing Order No. 1 on October 3, 2013, Financing Orders No. 2, No. 3 and No. 4 on June 26, 2015 and Financing Order No. 5 on September 29, 2017, each authorizing the UDSA to issue Restructuring Bonds. Each financing order authorized Restructuring Bonds secured by a separate restructuring charge created pursuant to that financing order. A total of \$4.5 billion of UDSA Restructuring Bonds have been issued.

The operations of the UDSA are presented as a proprietary fund following the accrual basis of accounting in order to recognize the flow of economic resources. Revenue which is based on the UDSA's Restructuring Charge is set at an amount sufficient to recover the debt service payments and other cash operating expenses that the UDSA incurs in any given year.

The UDSA is considered a blended component unit of LIPA. The results of operations are consolidated with LIPA for financial reporting purposes.

Utility Debt Securitization Authority
(Thousands of Dollars)

Description	2020	2021		2022		2023	
	Actual	Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Revenues	\$ 350,684	\$ 349,589	\$ 365,046	\$ 344,993	\$ (4,596)	\$ 409,445	\$ 64,451
Operating Expenses							
Uncollectible Accounts	1,817	1,790	410	2,801	1,011	3,153	352
General and Administrative Expense							
Ongoing Servicer Fee	2,250	2,250	2,208	2,250	-	2,250	-
Administration Fees	500	500	542	500	-	500	-
Bond Administration Fees	252	390	188	152	(238)	152	-
Directors and Officers Insurance	272	362	285	330	(32)	347	17
Accounting, Legal & Misc. Fees	89	155	155	155	-	155	-
Total General and Administrative Expense	3,363	3,657	3,378	3,388	(269)	3,404	17
Amortization of Restructuring Property	165,980	221,742	234,806	223,082	1,341	263,387	40,305
Interest Expense	192,803	187,619	187,619	179,694	(7,925)	170,835	(8,859)
Amortization of Premium	(45,706)	(45,119)	(45,119)	(42,050)	3,069	(38,116)	3,934
Amortization of Deferred Debt Issuance Costs	2,175	2,039	2,036	1,886	(153)	1,740	(145)
Total Interest Expense	149,272	144,539	144,536	139,530	(5,009)	134,459	(5,071)
Reserve Fund Earnings	775	1,441	37	38	(1,404)	38	-
Change in Net Position	\$ 31,027	\$ (20,697)	\$ (18,047)	\$ (23,770)	\$ (3,073)	\$ 5,079	\$ 28,848

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Projected Borrowing Requirements and Bank Facilities

LIPA will fund \$759.9 million of infrastructure investments in 2022 with new debt issuances of \$538.2 million, or approximately 70% debt financing. The balance of capital expenditures will be grant and pay-as-you-go funded. LIPA expects to generate funds from operations of \$223.6 million and \$239.5 million in 2022 and 2023, respectively.

The Percent of Capital Expenditures Funded from Debt will exceed LIPA's target of 64% in 2022 and 2023. LIPA projects the percentage of Capital Expenditures Funded from Debt will decrease steadily over the next few years, achieving the Board target by 2025. This is due to the need to increase Capital investments to meet Board priorities. LIPA is increasing investments in Transmission and Distribution Reliability by \$51.4 million and maintaining Storm Hardening investments at \$70.0 million. In addition, LIPA will increase investments in Information Technology systems by \$23.0 million in 2022. To mitigate the impact of the increased Capital spending, LIPA is increasing the Coverage Ratio from 1.35x to 1.40x, which results in an additional \$38.1 million in operating revenue being generated to fund the Capital investments. LIPA will continue to monitor its debt financing as a percentage of Capital expenditures and adjust its financial policy, if warranted.

Projected Borrowing Requirements and Bank Facilities
(Thousands of Dollars)

Description	2020		2021		2022		2023	
	Actual		Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
Total Capital Expenditures	(a) \$ 782,462		\$ 791,026	\$ 743,299	\$ 759,871	\$ (31,155)	\$ 782,551	\$ 22,681
FEMA Contribution	(40,358)		(21,973)	(18,724)	(2,421)	19,552	-	2,421
Net Capital Expenditures	742,104		769,053	724,575	757,450	(11,603)	782,551	25,101
Net Coverage Funding of Capital Expenditures	(238,300)		(187,930)	(205,494)	(223,610)	(35,680)	(239,479)	(15,869)
Projected Borrowing Requirements	503,805		581,123	519,082	533,840	(47,283)	543,073	9,233
Projected Cost of Issuance on Borrowing Requirements	2,958		3,586	5,105	4,398	812	4,626	228
Projected Borrowing Requirements with Cost of Issuance	(b) 506,763		584,708	524,187	538,238	(46,470)	547,699	9,461
Series 2014C - Floating Rate Notes	-		-	-	-	-	150,000	150,000
Series 2015C - Floating Rate Notes	-		-	-	-	-	149,000	149,000
Series 2016A - Floating Rate Notes	-		175,000	175,000	-	(175,000)	-	-
Series 2015A&B - Floating Rate Notes	200,000		-	-	-	-	200,000	200,000
General Revenue Notes, Series 2015	1,000,000		-	-	100,000	100,000	100,000	-
Revolving Credit Agreement	-		-	-	200,000	200,000	-	(200,000)
Bonds Subject to Mandatory Refinancing & Bank Facilities	\$ 1,200,000		\$ 175,000	\$ 175,000	\$ 300,000	\$ 125,000	\$ 599,000	\$ 299,000

Note: (a) This reflects LIPA's budget amendment for the purchase of Garden City Property of \$27.1 million in 2021.

(b) The Projected Borrowing amount is a calculated value. Actual borrowing level may differ due to premium and other considerations.

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Capital Structure

LIPA expects to fund its capital investments utilizing a combination of grants, short and long-term debt financing and pay-as-you-go funding from revenue through 2023.

After funding \$3.1 billion in infrastructure investments from 2020 through 2023, total projected debt outstanding for LIPA and UDSA will rise approximately \$1.1 billion.

Lease Obligations will decrease by \$1.0 billion, from \$2.8 billion in 2020 to \$1.8 billion in 2023. Lease Obligations reflect the net present value of lease contracts that are considered financing arrangements under the Governmental Accounting Standards Board (GASB). The Lease Obligation definition had been revised to reflect a GASB Statement No. 87 – Leases in 2020. As a result, approximately \$1.0 billion of lease contracts that had previously not been capitalized were reclassified as Lease Obligations. For example, under the prior GASB rule, the contract with National Grid for the operation of on-island power generation did not meet the lease capitalization criteria.

Combined debt and lease balances will increase slightly by \$81.1 million, from \$11.4 billion at the end of 2020 to \$11.5 billion at the end of 2023.

LIPA's Debt to Capital Ratio decreases from 91.9% in 2020 to 89.9% in 2023. The Debt to Asset Ratio declines from 94.1% in 2020 to 89.8% in 2023. Both ratios are expected to continue to decline over time.

Capital Structure
(Thousands of Dollars)

Description	2020 Actual	2021		2022		2023	
		Approved	Projected	Proposed	Change from Prior Year	Projected	Change from Prior Year
UDSA Long Term Debt Outstanding	\$ 3,882,775	\$ 3,703,356	\$ 3,703,356	\$ 3,525,845	\$ (177,511)	\$ 3,294,185	\$ (231,660)
LIPA Long Term Debt Outstanding	4,462,713	4,628,280	5,016,929	4,943,781	315,501	5,761,208	817,427
LIPA Short Term Debt Outstanding	305,000	174,093	151,194	151,194	(22,898)	151,194	-
Total LIPA Debt Outstanding	4,767,713	4,802,373	5,168,124	5,094,975	292,602	5,912,402	817,427
LIPA Long Term Debt To Be Issued (a)	-	584,708	524,187	538,238	(46,470)	547,699	9,461
Projected UDSA Debt	3,882,775	3,703,356	3,703,356	3,525,845	(177,511)	3,294,185	(231,660)
Projected LIPA Debt	4,767,713	5,387,081	5,692,310	5,633,213	246,132	6,460,101	826,888
Total Projected Debt	8,650,488	9,090,437	9,395,666	9,159,058	68,621	9,754,286	595,228
Lease Obligations (b)	2,791,544	2,457,256	2,472,147	2,122,438	(334,818)	1,768,886	(353,552)
Total Debt and Lease Obligations	11,442,032	11,547,694	11,867,813	11,281,497	(266,197)	11,523,172	241,675
Excess of Revenues Over Expenses	18,820	24,633	40,983	55,186	30,552	82,211	27,025
Net Position Before Deferred Grants	537,688	539,686	578,671	633,857	94,171	716,067	82,211
Deferred Grants (c)	470,312	602,546	609,003	591,271	(11,275)	573,528	(17,743)
Net Position	\$ 1,008,000	\$ 1,142,232	\$ 1,187,674	\$ 1,225,128	\$ 82,896	\$ 1,289,595	\$ 64,468
Debt to Capital Ratio (d)	91.9%	91.0%	90.9%	90.2%	-0.8%	89.9%	-0.3%
Debt to Asset Ratio (e)	94.1%	94.9%	94.6%	92.4%	-2.5%	89.8%	-2.6%

Note: (a) Long-term debt to be issued reflects projected borrowing requirements to fund Capital Expenditures excluding carry over proceeds from the prior year, bond premium, and bond refinancing. 2020 actual debt issuances are included in LIPA Current Debt Outstanding amount.

(b) The 2020 Lease Obligation amounts and the associated Coverage calculation reflect GASB No. 87 (Leases) implementation in 2020. GASB No. 87 revised the definition of a lease obligation. As a result, lease contracts that had previously not been capitalized will be reclassified as Long-term Lease Obligations starting in 2020.

(c) Deferred Grants are funds received from FEMA for a \$730.0 million storm hardening program. LIPA has deferred recognition of the grant income to align the grant receipts with the associated depreciation expense of the assets funded through the grant.

(d) Debt to Capital Ratio is calculated by taking (i) debt and leases and dividing by (ii) debt, leases, and Net Position.

(e) Debt to Asset Ratio is calculated by taking (i) debt and leases and dividing by (ii) utility plant assets and working capital.

A

B

C=A/(A+B)

2022 Proposed and 2023 Projected Capital Expenditures
(Thousands of Dollars)

Transmission & Distribution	Location	Investment Description	In Service Date	Total Project Cost	Project To Date Expenditures through 12/31/21 (a)	Proposed 2022	Projected 2023
Load Growth Projects							
	South Fork	Upgrade Transmission Lines from 23 kV to 33 kV	May-22	1,100	407	693	-
	Ocean Beach	Install new 4kV circuit	Jun-22	6,708	703	6,005	-
	Arverne	Install new 33kV circuit to Far Rockaway substation	Jun-22	31,186	7,950	14,324	8,912
	Belmont	Install new 13 kV distribution circuit	Jun-22	7,100	-	7,100	-
	Stewart Manor	Upgrade distribution feeder and install step down bank	Jun-22	4,091	2,958	1,132	-
	Round Swamp	Construct new 69/13kV substation	Jun-22	27,736	18,336	9,400	-
	Brightwaters	Install new transformer and switchgear	Jun-22	16,850	5,075	11,775	-
	Rockaway Beach	Install new 33/13 kV bank and switchgear	Jun-22	12,578	3,944	8,634	-
	Southampton	Install new 13kV distribution circuit	Jun-22	7,890	5,398	2,492	-
	Bridgehampton	Replace the control and battery enclosure	Jun-22	3,017	1,907	1,110	-
	Eastport	Reconductor conversion and reinforcement	Jun-22	3,401	422	2,978	-
	Culloden Point	Upgrade substation from 23 kV to 33 kV	Dec-22	3,289	2,754	426	109
	Buell	Upgrade substation from 23 kV to 33 kV	May-23	12,336	3,346	5,153	3,836
	Pilgrim	Reconfigure 69kV Bus	Jun-23	1,107	-	264	844
	Broadway	Upgrade distribution feeder from 4kV to 13kV	Jun-23	4,250	246	1,299	2,705
	Rockaway Beach	Install new 33 kV circuit to Arverne	Jun-23	36,898	6,838	7,978	11,251
	Park Place (2A)	Feeder Extension (Superblock)	Jun-23	4,943	-	2,148	2,795
	Ocean Beach	Conversion and reinforcement	Jun-23	3,057	53	53	2,952
	Massapequa	Construct new 69/13kV substation	Jun-23	33,035	7,746	11,512	13,777
	Garden City	Upgrade distribution feeder from 4kV to 13kV	Jun-23	3,510	326	2,003	1,182
	Bridgehampton	Install 2 new feeders and conversion and reinforcement	Jun-23	11,982	95	5,006	2,493
	Bridgehampton	Install new 3rd bank and switchgear	Jun-23	11,347	3,387	4,187	3,773
	Amagansett	Upgrade Substation from 23 kV to 33 kV	Oct-23	11,867	11,020	602	100
	Navy Road	Install two new 33 kV capacitor banks	Nov-23	1,874	300	1,020	554
	Navy Road	Construct new 23/13 kV substation (Montauk substation replacement)	Dec-23	30,801	27,530	2,341	324
	Hero	Upgrade substation from 23 kV to 33 kV	Dec-23	685	172	70	120
	East Hampton	Upgrade substation from 23 kV to 33 kV	May-24	4,595	1,752	417	1,424
	Hither Hills	Upgrade substation from 23 kV to 33 kV	May-24	12,973	402	2,603	4,077
	Belmont	Convert substation from 33 kV to 69 kV	Jun-24	72,911	-	7,000	30,000
	New South Road	Expand 69/13kV substation & distribution circuits	Jun-24	21,032	6,904	897	6,342
	North Bellmore	Install 33 MVA bank, switchgear, and feeders	Jun-24	28,815	404	3,765	16,530
	Bridgehampton	Install New 69kv Circuit to Buell Substation	Jun-25	45,520	3,604	1,121	878
	Elwood	Install new distribution bank and switchgear	Jun-25	32,287	-	212	3,662
	Deerfield	Reconfigure 69kV double circuit to Canal Substation	Jun-26	2,283	280	182	14
	Southampton	Install new 138kV cable to Deerfield	Jun-28	142,446	93	3,293	2,100
	Various	Distribution facilities to serve new business		-	-	37,073	38,927
	Various	Residential underground development to serve new business		-	-	12,000	12,000
Total Load Growth Projects				\$ 655,499	\$ 124,353	\$ 178,268	\$ 171,680
Reliability Projects							
	Newbridge (5M)	Bank # 1 failure	Mar-22	2,808	517	2,291	-
	Captree	Install New 23kV Circuit to Robert Moses Substation	Jun-22	8,237	5,381	2,856	-
	Northport	Phase Shifter - Replacement LTC controls or perform upgrade	Jun-22	417	245	172	-
	Northport	Replace radiators and oil pumps with associated valving for banks 1 to 4	Dec-22	5,405	2,948	2,457	-
	Greenlawn	Elwood splice upgrade project	Dec-22	1,380	-	1,380	-
	Broadway	Hewlett reconfiguration	May-23	4,232	-	1,000	3,232
	Various	Two Way Radio System 16th Radio Frequency Site	Dec-23	700	-	350	350
	Fire Island Pines	Install New 23 kV Circuit to Ocean Beach Substation	Jun-24	46,143	2,451	1,086	21,365
	East Garden City	Switchgear replacement	Jun-24	49,032	3,119	16,579	12,285
	Various	Distribution Automation Repeater Site Telecom Network Management System	Dec-24	310	-	-	60
	Various	DA Radio Management & Reporting	Dec-24	300	-	-	90

(a) Project to date expenditures includes projects that began prior to 2021

*Project includes funding that is pending authorization.

2022 Proposed and 2023 Projected Capital Expenditures
(Thousands of Dollars)

Transmission & Distribution	Location	Investment Description	In Service Date	Total Project Cost	Project To Date Expenditures through 12/31/21 (a)	Proposed 2022	Projected 2023
	Smithtown	Storm hardening	Dec-24	34,120	-	-	1,000
	North Bellport	Eastport 23kV conversion	May-26	26,435	-	-	125
	Long Beach	Park Place system reconfiguration	Dec-26	15,113	-	-	400
	Huntington Village	Substation supply hardening	Dec-26	16,700	-	-	1,320
	Various	Upgrade supervisory controllers for Capacitor Banks		-	-	3,430	3,560
	Various	Transformer monitoring		-	-	2,950	2,950
	Various	Distribution circuit improvement program (CIP)		-	-	16,000	9,000
	Various	Remote terminal unit replacement/upgrades		-	-	2,796	2,700
	Various	Distribution breaker replacements		-	-	748	748
	Various	Mechanical relay replacements		-	-	685	800
	Various	Substation battery replacements		-	-	540	540
	Various	Substation control power transformer replacements		-	-	262	262
	Various	Transformer major component replacements		-	-	1,750	1,750
	Various	Pipe type cable low pressure trip		-	-	1,366	1,366
	Various	Pipe type cable terminal pressure monitoring upgrade program		-	-	905	-
	Various	Transmission cables cathodic replacements		-	-	374	374
	Various	Transmission pipe type cable pump house upgrade/replacement		-	-	860	860
	Various	Transmission protection and controls upgrades		-	-	2,758	3,200
	Various	Transmission breaker replacements		-	-	2,500	2,500
	Various	Transformer load tap changer replacements		-	-	690	690
	Various	Substation lightning & grounding upgrades		-	-	790	790
	Various	Protection lease line upgrade		-	-	950	800
	Various	Upgrade corrosion protection system for pipe type cable		-	-	2,000	1,750
	Various	Cap and pin insulator replacements		-	-	800	425
	Various	Replace (13) trailer mounted capacitor banks with fixed banks		-	-	5,154	6,154
	Various	Distribution switchgear replacements		-	-	1,500	2,000
	Various	Substation transformers replacements		-	-	5,000	11,150
	Various	Distribution pole mounted switches and RTU replacements		-	-	500	500
	Various	Annunciator replacement		-	-	444	444
	Various	Transmission wood pole replacement on the LIRR right-of-way		-	-	300	3,000
	Various	Transmission wood pole replacement on public/LIPA right-of-way		-	-	70	4,692
	Various	Distribution voltage remediation program		-	-	3,000	3,000
	Various	Substation distribution circuit relay upgrade		-	-	403	500
	Various	Install Transmission 3V0		-	-	2,176	-
	Various	Rear yard distribution circuits relocation/undergrounding		-	-	500	5,433
	Various	Distribution transformers - add/replace		-	-	18,649	19,581
	Various	Distribution system improvements - services, branch lines & customer requests		-	-	30,975	32,524
	Various	Substation equipment failures		-	-	7,000	8,000
	Various	System spares		-	-	14,600	5,800
	Various	Accidents		-	-	12,332	12,949
	Various	Underground distribution cable upgrades		-	-	15,200	17,000
	Various	Public works		-	-	9,293	12,000
	Various	Distribution pole replacements		-	-	13,782	14,196
	Various	Distribution multiple customer outages (MCO)		-	-	7,490	7,715
	Various	Residential underground cables upgrades		-	-	11,400	13,000
	Various	Transmission system failures		-	-	636	668
	Various	Transmission pole replacements		-	-	745	782
	Various	Transmission & Distribution Wood Pole Reinforcement		-	-	1,600	8,400
	Various	Distribution Automation Repeater Network and Site Upgrades		-	-	675	675
	Various	Two Way Radio System Mobile Radios and Antennas for Fleet Vehicles		-	-	104	104
	Various	Replacement of Non-restorable Distribution Wood Pole Rejects		-	-	12,814	6,960
Total Reliability Projects				\$ 211,332	\$ 14,661	\$ 247,668	\$ 272,518

(a) Project to date expenditures includes projects that began prior to 2021

*Project includes funding that is pending authorization.

2022 Proposed and 2023 Projected Capital Expenditures
(Thousands of Dollars)

Transmission & Distribution	Location	Investment Description	In Service Date	Total Project Cost	Project To Date Expenditures through 12/31/21 (a)	Proposed 2022	Projected 2023
Storm Hardening Projects							
	Various	Storm hardening program		-	-	70,000 *	70,000
Total Storm Hardening Projects				\$ -	\$ -	\$ 70,000	\$ 70,000
Tools, Equipment, Other, Economic, Salvage							
	Glenwood Landing	Substation structural modifications	Mar-22	8,492	4,336	4,156	-
	Arverne	MTA Beach 67th Relocation	May-22	3,043	451	2,592	-
	Edwards Avenue	Interconnection costs associated with sPower Riverhead Solar Farm 2	Dec-22	270	-	270	-
	East Hampton	Interconnection costs associated with South Fork wind farm	Apr-23	3,024	24	-	3,000
	Terryville	Install new 69 kV cable to Flowerfield	Jun-23	52,505	2,048	21,474	28,983
	Various	Vacuum Truck Project - Vehicles for Trenching	Nov-23	1,780	-	-	1,780
	Various	Wire Pulling Tool - Pilot New Innovation	Nov-23	440	-	280	160
	Various	Control House HVAC (JMUX Climate Control)	Nov-22	50	-	50	-
	Various	Ground Vehicle Wire Pulling Project (LIRR & Substation Grounds)	Nov-24	1,200	-	-	970
	Hicksville	Transmission operations control room facility replacement	Mar-26	104,450	-	10,907	15,330
	Various	LIRR program upgrade		-	-	-	1,200
	Various	Substation security upgrade		-	-	5,000	5,000
	Various	Capital tools		-	-	3,200	3,200
	Various	Transfer distribution facilities to new telephone poles		-	-	12,800	10,059
	Various	Salvage		-	-	(500)	(500)
Total Tools, Equipment, Other, Economic, Salvage				\$ 175,254	\$ 6,859	\$ 60,229	\$ 69,182
Grand Total Transmission & Distribution				\$ 1,042,084	\$ 145,873	\$ 556,165	\$ 583,380

(a) Project to date expenditures includes projects that began prior to 2021

*Project includes funding that is pending authorization.

2022 Proposed and 2023 Projected Capital Expenditures
(Thousands of Dollars)

Information Technology	Investment Description	In Service Date	Total Project Cost	Project To Date Expenditures through 12/31/21 (a)	Proposed 2022	Projected 2023
Transmission & Distribution						
	Cyberark for CNI	2022	1,550	-	1,550	-
	Dragos for CNI	2022	1,150	-	1,150	-
	Industrial Defender for DSCADA	2022	1,450	-	1,450	-
	Outage and Incident Communications - Phase 2	2022	1,300	-	600	700
	AVLS Integration with Physical ID Badge System	2022	800	-	800	-
	CAD & OMS Operational Enhancements	2022	2,000	-	2,000	-
	On Line Application Portal	2023	3,000	-	1,500	1,500
	ADMS Network Model and Roadmap	2023	3,000	-	600	2,400
	CG Concentrator Replacement	2023	3,550	-	2,150	1,400
	EZE Storm Restoration - Resource Allocation and Tracking	2023	2,900	-	500	2,400
	Mobile Timesheets	2023	3,000	-	-	3,000
	Team Center Replacement	2024	4,250	-	250	2,000
	ADMS Advanced Modules	2025	5,200	-	-	1,300
	GIS upgrade	Program	-	3,232	3,079	600
	NEDLI Upgrade	Program	-	-	500	-
	Control room recorder upgrade	Program	-	-	1,250	-
	Refresh the CNI PI system	Program	-	-	2,000	-
	New Business Portal	Program	-	-	1,250	-
	Cybersecurity continuous improvement for CNI	Program	-	-	850	1,050
	Asset Health Analytics Program	Program	-	-	-	-
	MEGA - Additional Functionalities	Program	-	-	250	250
	MEGA - Storm Damage Assessment App	Program	-	-	250	250
	SCADA RTU Work	Program	-	-	525	525
	T&D mobile applications (Field Mobile App)	Program	-	-	1,700	1,200
Total Transmission & Distribution			\$ 33,150	\$ 3,232	\$ 24,204	\$ 18,575
Customer Service						
	TCPA Preference Management Tool	2022	500	-	500	-
	Sitecore Upgrade	2022	2,675	1,575	1,100	-
	Bill Print & Bill Image Migration - new vendor	2022	1,310	317	993	-
	CDG Billing Automation	2022	1,000	-	1,000	-
	Community Choice Aggregation (CCA)	2022	1,798	548	1,250	-
	Payment Processing	2022	1,000	-	1,000	-
	Solar Communities (FIT 5) bill credits	2022	500	-	500	-
	Suffolk County Sewage Billing Project	2022	400	-	400	-
	Bill Simplification	2022	500	-	500	-
	Customer Accounting System (CAS) Replacement for LI	2025	80,000	-	-	20,000
	Kubra Enhancement	Program	-	-	500	500
	Mobile app Enhancement	Program	-	401	750	750
	myAccount Enhancement	Program	-	642	750	1,500
	AMI Enhancement	Program	-	1,607	1,500	2,000
	Customer Accounting System (CAS) Enhancement	Program	-	-	500	500
	Rate change product Enhancement	Program	-	-	600	1,000
	Contact Center as a Service (CCaaS)	Program	-	-	4,500 *	3,000
	CRM modernization - Salesforce Enhancement	Program	-	-	400	500
Total Customer Service			\$ 89,683	\$ 5,089	\$ 16,743	\$ 29,750

(a) Project to date expenditures includes projects that began prior to 2021

*Project includes funding that is pending authorization.

2022 Proposed and 2023 Projected Capital Expenditures
(Thousands of Dollars)

Information Technology	Investment Description	In Service Date	Total Project Cost	Project To Date Expenditures through 12/31/21 (a)	Proposed 2022	Projected 2023
Information Technology						
	Plexos Financial Forecast Tools for PM	2022	250	-	250	-
	Sailpoint Access Control	2022	1,300	-	1,300	-
	Direct Connect to Mulesoft CloudHub	2022	650	-	650	-
	Internet Bandwidth Upgrade	2022	2,550	-	2,550	-
	Oracle Database 11g upgrade	2022	750	-	750	-
	MS 365/Sharepoint Migration	2022	700	-	700	-
	System Resiliency	2022	3,500	-	3,500	-
	System Segregation	2022	3,500	-	3,500 *	-
	Upgrade MAPS/MARS with DR capability	2023	2,700	-	1,100	500
	Config Management Tool	2023	500	-	-	500
	Datacenter Modernization	2023	500	-	-	500
	System Monitoring Enhancements	2023	900	-	-	900
	Replace Sonic ESB with Mulesoft	2023	2,000	-	1,000	1,000
	Cybersecurity NIST-CSF Tier 3 Implementation	2023	3,000	-	2,500	500
	Enterprise Resource Planning Replacement (HR + Finance)	2025	28,000	-	-	8,000
	Enterprise Asset Management System (EAMS)	2025	30,000	-	-	8,000
	Replace Messageway SFTP solution	Program	-	-	600	-
	Oracle DB upgrade LCP	Program	-	-	2,600	-
	Virtual Host Servers LCP Upgrade	Program	-	-	2,500	-
	Windows 2016 Operating System Upgrade	Program	-	-	500	-
	IT Data Analytics 2022	Program	-	-	2,000 *	2,000
	2022+ Cybersecurity continuous improvement	Program	-	-	2,200	250
	Mulesoft platform continuous improvement	Program	-	5,395	-	1,000
	Citrix HW/SW Upgrade LCP	Program	-	500	200	-
	Corp Wireless Network Upgrade LCP	Program	-	400	350	-
	Firewall LCP	Program	-	-	-	750
	IP Phone LCP	Program	-	-	550	-
	JMUX HW Equipment LCP	Program	-	100	100	100
	Laptop LCP	Program	-	-	300	300
	Legacy Software Remediation Program	Program	-	-	500	500
	Mainframe LCP	Program	-	-	300	300
	Switch/Router LCP	Program	-	-	1,050	1,100
	UPS LCP	Program	-	-	150	150
Total Information Technology			\$ 80,800	\$ 6,395	\$ 31,700	\$ 26,350
Grand Total Information Technology Projects			\$ 203,633	\$ 14,716	\$ 72,647	\$ 74,675

(a) Project to date expenditures includes projects that began prior to 2021

*Project includes funding that is pending authorization.

2022 Proposed and 2023 Projected Capital Expenditures
(Thousands of Dollars)

Utility 2.0	Investment Description	Total Project Cost	Project To Date Expenditures through 12/31/21 (a)	Proposed 2022	Projected 2023
2018 Utility 2.0 Filing					
Empowering Customers					
	Core AMI: Operational	188,724	178,518	10,206	-
	Core AMI: PMO + Change Management	7,813	5,673	2,140	-
	AMI-Enabled Capabilities	13,800	10,397	3,403	-
	Enabled AMI: Rate Modernization	10,300	7,686	2,182	432
	Enabled AMI: Analytics	5,711	4,486	1,225	-
	Total Empowering Customers	\$ 226,350	\$ 206,761	\$ 19,156	\$ 432
Evolving to the DSP					
	Utility of the Future / CVR / JU	1,176	801	375	-
	Grid Storage	12,212	4,013	5,387	2,812
	Total Evolving to the DSP	\$ 13,388	\$ 4,815	\$ 5,762	\$ 2,812
Total 2018 Utility 2.0 Filing Projects		\$ 239,738	\$ 211,576	\$ 24,918	\$ 3,244
2019 Utility 2.0 Filing					
New Initiatives					
	Energy Concierge Pilot	1,550	-	29	978
	Electric School Bus V2G Pilot	84	-	84	-
	Total New Initiatives	\$ 1,634	\$ -	\$ 113	\$ 978
Total 2019 Utility 2.0 Filing Projects		\$ 1,634	\$ -	\$ 113	\$ 978
2020 Utility 2.0 Filing					
New Initiatives					
	C&I Demand Alert Pilot	1,776	-	-	1,773
	Enhanced Marketplace	1,813	-	-	1,406
	NWS Process Development	-	-	-	-
	CVR Program	648	60	588	-
	DER Visibility	3,947	-	3,947	-
	Total New Initiatives	\$ 10,863	\$ 1,513	\$ 4,566	\$ 4,374
Total 2020 Utility 2.0 Filing Projects		\$ 10,863	\$ 1,513	\$ 4,566	\$ 4,374
2021 Utility 2.0 Filing					
New Initiatives					
	EV Make-Ready Phase II	62,388	-	9,817	16,361
	Rate Modernization - Expansion	-	-	-	-
	Suffolk County Bus Initiative	600	-	600	-
	Total New Initiatives	\$ 62,988	\$ -	\$ 10,417	\$ 16,361
Total 2021 Utility 2.0 Filing Projects		\$ 62,988	\$ -	\$ 10,417	\$ 16,361
New Program Funding		-	-	-	\$ 5,000
Total Utility 2.0 Projects		\$ 315,223	\$ 213,089	\$ 40,013	\$ 29,957

(a) Project to date expenditures includes projects that began prior to 2021

2022 Proposed and 2023 Projected Capital Expenditures
(Thousands of Dollars)

Business Units	Investment Description	In Service Date	Total Project Cost	Project To Date Expenditures through 12/31/21 (a)	Proposed 2022	Projected 2023
Customer Service						
	Purchase Electric Meters	Blanket	-	-	2,500	7,321
	Install/Remove Meters	Blanket	-	-	4,169	4,239
	Tools/Equipment	Program	-	-	500	500
	RF Network enhancements solar/battery backup		-	-	-	100
	Dusk to Dawn		18,100		2,814	250
Total Customer Service Projects			\$ 18,100	\$ -	\$ 9,983	\$ 12,410
Facilities						
	Facilities Services	Program	-	-	3,072	4,071
Total Facilities Projects			\$ -	\$ -	\$ 3,072	\$ 4,071
Fleet						
	Fleet	Program	-	-	7,222	22,550
Total Fleet Projects			\$ -	\$ -	\$ 7,222	\$ 22,550
Total PSEG LI Projects					\$ 689,102	\$ 727,043
FEMA Storm Hardening					\$ 2,690	\$ -
Storm Capitalization					\$ 4,755	\$ 5,043
Pending Project Authorization					\$ (59,400)	\$ -
Grand Total PSEG Long Island and FEMA Related					\$ 637,147	\$ 732,085

(a) Project to date expenditures includes projects that began prior to 2021

LIPA's Relationship with New York State Government

LIPA is a component unit of New York State. LIPA became the retail supplier of electric service in the Counties of Nassau and Suffolk (with certain limited exceptions) and a portion of Queens County known as the Rockaways (Service Area), on May 28, 1998 by acquiring the transmission and distribution system of the Long Island Lighting Company as a wholly owned subsidiary. LIPA provides electric delivery service in the Service Area, which includes approximately 1.1 million customers. The population of the Service Area is approximately 2.9 million. In order to assist LIPA in providing electric service to its customers, LIPA entered into operating agreements to provide operating personnel and a significant portion of the power supply resources necessary to provide electric service.

Under LIPA's business model, essentially all costs of operating and maintaining LIPA's T&D system incurred by PSEG Long Island, are paid for by LIPA.

Long Island Power Authority 2022 Proposed and 2023 Projected Operating and Capital Budgets

Budget Process

Under the terms of the LIPA Reform Act and the Amended and Restated Operations Services Agreement, the LIPA Consolidated Budget and Financial Plan are jointly developed by LIPA and its Service Provider, PSEG Long Island.

The LIPA Consolidated Budget outlines projected spending by major expense and revenue category. The budget reflects the operating and capital costs required to provide electric service in the Service Area.

Budget Development Schedule:

- April through October: LIPA and PSEG Long Island develop projections of current year spending and preliminary budget forecasts for the upcoming year and financial plan.
- June through October: PSEG Long Island provides LIPA with preliminary Capital project projections.
- September and October:
 - PSEG Long Island provides LIPA with a preliminary budget. This includes projections for current year spending as well as a preliminary budget for the years covered by the financial plan. The preliminary budget submission is reviewed by LIPA.
 - LIPA provides PSEG Long Island its portion of the Consolidated Budget by mid-October.
 - PSEG Long Island produces a LIPA Consolidated Budget by the end of October.
 - The LIPA Consolidated Budget is reviewed by senior level staff from both LIPA and PSEG Long Island.
- November:
 - Public Hearings are held in November to solicit comments from the public.
 - The Board of Trustees is briefed on the budget during regular board meeting.
- December: The Board of Trustees votes on the adoption of the LIPA Consolidated Budget.

Section Three

2022 Proposed Performance Standards



Below is a summary of performance standards that will apply to 2022. For more details, please see the complete metric descriptions available on LIPA's website.

Metric		At Risk Compensation	Metric Objective & Deliverables
Transmission & Distribution			
T&D-1	Asset Management Program Implementation - Asset Inventory	\$150,000	Requires PSEG LI to collect and document all Transmission and Distribution (T&D) assets as part of an Asset Management Program in accordance with the the Asset Management Recommendations adopted by the LIPA Board of Trustees.
T&D-2	Asset Management Program Implementation - Governance	\$200,000	Requires PSEG LI to develop and implement effective governance of an Asset Management Program in accordance with the Asset Management Recommendations adopted by the LIPA Board of Trustees.
T&D-3	Asset Management Program - Enterprise Asset Management System (EAMS)	\$600,000	Requires PSEG LI to plan and implement a full-fledged, electronic EAMS to track all asset, work, maintenance, and inventory activities, to be used for an Asset Management Program, including preventive and predictive maintenance of the T&D system, providing improved reliability and reduced cost to customers.
T&D-4	Transmission & Distribution System Mis-Operations	\$100,000	Requires PSEG LI reduce the number of relay mis-operations on the T&D System by 5% compared to the 3-year average.
T&D-5	Transmission & Distribution Operating Errors	\$100,000	Requires PSEG LI to limit the number of operating errors on the T&D System by 5% compared to the 3-year average.
T&D-6	PTCC Replacement	\$250,000	Requires PSEG LI to execute deliverables related to strategic considerations and conceptual facility designs for the construction of a new Primary Transmission Control Center (PTCC) and Alternate Transmission Control Center (ATCC) to replace the facilities that manage the electric flows on the Long Island electric grid.
T&D-7	System Average Interruption Duration Index (SAIDI) Reliability	\$400,000	Requires PSEG LI to maintain the outages (>5 minutes in duration) experienced by the average customer at under 1 hour annually, which is within the top 10% of peer utilities.
T&D-8	System Average Interruption Frequency Index (SAIFI) Reliability	\$200,000	Requires PSEG LI to maintain the number of outages experienced by the average customer at 1 outage (>5 minutes in duration) every 16 months, which is within the top 10% of peer utilities.
T&D-9	Momentary Average Interruption Frequency Index (MAIFI) Reliability	\$200,000	Requires PSEG LI to reduce the number of momentary outages (<5 minutes in duration) by 13% compared to the 3-year average. Performance has steadily improved and is now approaching the median level of peer utilities.
T&D-10	Reduce Sustained Multiple Customer Outages (S-MCOs)	\$150,000	Requires PSEG LI to reduce the number of customers with more than 4 outages (> 5minutes in duration) per year by 22% to meet the 3-year average, achieving performance that is within the top 25% of peer utilities.
T&D-11	Reduce Repeat Customer Sustained Multiple Customer Outages (S-MCOs)	\$200,000	Requires PSEG LI to improve circuit conditions for customers that have had more than 4 outages (>5 minutes in duration) per year for three or more consecutive years. PSEG LI will remediate circuit conditions accounting for at least 80% of these customers.
T&D-12	Reduce Momentary Multiple Customer Outages (M-MCOs)	\$150,000	Requires PSEG LI to reduce the customers with more than six momentary outages (<5 minutes in duration) per year by 20% compared to the 3-year average.
T&D-13	Safety – Serious Injury Incident Rate	\$200,000	Requires PSEG LI to safely maintain, construct, and operate the electric T&D system without risk of serious injuries and/or fatalities. The target level of performance is within the 25% of peer utilities.

T&D-14	Safety – OSHA Recordable Incidence Rate	\$250,000	Requires PSEG LI to maintain employee safety as recorded by OSHA incidents at the 3-year average and increase focus on safety training, employee awareness, and diligence.
T&D-15	Safety – OSHA Days Away Rate	\$250,000	Requires PSEG LI to improve employee safety as recorded by OSHA Days Away. The target level is approximately 22% better than the 3-year average.
T&D-16	Safety – Motor Vehicle Accident (MVA) Rate	\$100,000	Requires PSEG LI to reduce the Motor Vehicle Accident (MVA) Rate by 5% compared to the 3-year average.
T&D-17	Work Management Process Enhancements - Short-Term Scheduling	\$150,000	Requires PSEG LI to improve work management through short term scheduling in ways that optimize staffing levels, productivity, and overtime.
T&D-18	Work Management Process Enhancements - Workforce Management Plans	\$250,000	Requires PSEG LI to improve work management by creating an annual workplan with monthly visibility of all work to be completed in 2022.
T&D-19	Work Management Process Enhancements - Improve Planning and Tracking of Work	\$100,000	Requires PSEG LI to improve work management by improving the planning and tracking of work in ways that optimize staffing levels, productivity, and overtime.
T&D-20	Work Management Process Enhancements - Improve and Standardize Compatible Unit Estimating (CUEs)	\$100,000	Requires PSEG LI to enhance the governance and use of a detailed estimating process to improve cost and scheduling accuracy.
T&D-21	Work Management Process Enhancements - Work Management KPIs and Dashboards	\$100,000	Requires PSEG LI to develop work management metrics and tracking to identify opportunities to improve staffing levels, productivity, and reduce overtime in support of scheduled T&D work.
T&D-22	Work Management Process Enhancements - Clarify and Rationalize Work Management Roles	\$50,000	Requires PSEG LI to standardize work management roles/positions and implement consistency across yards.
T&D-23	Employee Overtime	\$300,000	Requires PSEG LI to manage T&D employee overtime hours by optimizing employee resources and demonstrating a 2 percentage point reduction in overtime hours worked from the previous 3-year average.
T&D-24	Vegetation Management Work Plan - Cycle Tree Trim With Vegetation Intelligence	\$200,000	Requires PSEG LI to develop and execute vegetation management plans to limit vegetation-caused outages using vegetation intelligence.
T&D-25	Vegetation Management Work Plan - Trim-To-Sky (TTS) Circuits	\$250,000	Requires PSEG LI to execute enhanced TTS vegetation management techniques that limit vegetation-caused outages.
T&D-26	Vegetation Management Work Plan - Hazard Tree Removal	\$400,000	Requires PSEG LI to identify and remove 12,000 “hazard” trees subject to falling and damaging the electric system during a storm, an increase from approximately 3,000 today.
T&D-27	Storm Hardening Work Plan - Overhead Hardening	\$250,000	Requires PSEG LI to develop and execute the milestones of the budgeted Storm Hardening Work Plans, which will strengthen the T&D system and improve its ability to withstand storms.

T&D-28	Storm Hardening Work Plan - Underground Hardening	\$150,000	Requires PSEG LI to develop a pilot program to identify electric system opportunities for rear-yard branch circuits to be converted from overhead to underground lines.
T&D-29	Storm Hardening Work Plan - Transmission Load Pockets	\$150,000	Requires PSEG LI to identify projects that will enhance system resiliency by providing alternate sources of power to transmission load pockets.
T&D-30	Storm Hardening Work Plan - ACRV Commissioning Program	\$250,000	Requires PSEG LI to begin a program to operationalize automatic overhead switches as tripping devices to reduce the amount of customers interrupted during a storm.
T&D-31	Storm Hardening Work Plan - LT5H (ASUV) Program	\$150,000	Requires PSEG LI to install a minimum of 150 automatic overhead switches that will reduce the amount of customers interrupted during a storm.
T&D-32	Estimated Time of Restoration (ETR)	\$200,000	Requires PSEG LI to improve by 10% the accuracy of restoration time estimates in blue sky conditions, giving customers the best available information regarding when their power will be restored.
T&D-33	Real Estate Strategy	\$100,000	Requires PSEG LI to execute the long-term strategy for LIPA's real estate and facility assets in accordance with the LIPA Board recommendations related to Real Estate Management.
T&D-34	Construction – Quality and Timely Completion of Project Justification Descriptions (PJDs)	\$200,000	Requires PSEG LI to provide timely and complete project justifications for each capital project and program for LIPA review and approval.
T&D-35	Construction – Project Milestones Achieved	\$200,000	Requires PSEG LI to complete a minimum of 85% of capital projects on time in accordance with the project milestone schedule, which is an improvement over the 3-year average performance.
T&D-36	Construction – Cost Estimating Accuracy	\$200,000	Requires PSEG LI to complete a minimum of 85% of capital projects at the estimated cost, which is an improvement over the 3-year average performance.
T&D-37	Completion of Program Planned Units Per Workplan	\$400,000	Requires PSEG LI to complete all units identified and budgeted in the construction program.
T&D-38	Program Unit Cost Variance	\$200,000	Requires PSEG LI to complete all units identified and budgeted in the construction programs within budget.
T&D-39	Project Completion Consistent with Project Design	\$100,000	Requires PSEG LI to manage capital projects completions such that they meet the approved design.
T&D-40	Double Wood Pole Reduction	\$50,000	Requires PSEG LI to maintain the backlog of double wood poles identified in the National Joint Utilities Notification System (NJUNS) at no higher than the 2021 year end result.
Compensation at Risk Based on Performance		\$8,000,000	

Metric		At Risk Compensation	Metric Objective & Deliverables
Information Technology - Organizational Performance			
IT-1	Organizational Maturity Level – Doing	\$250,000	Requires PSEG LI to improve its IT Organizational Maturity to Level 3 in the 'Doing' Category of the Capability Maturity Model Integration (CMMI) model within one year. This improves the capabilities of IT staff to implement IT projects.
IT-2	Organizational Maturity Level – Managing	\$500,000	Requires PSEG LI to improve its IT Organizational Maturity to Level 3 in the 'Managing' Category of the CMMI within one year. This improves the capabilities of IT staff to manage IT projects.
IT-3	System Resiliency	\$400,000	Requires PSEG LI to complete a well-designed and robust IT System Resiliency Plan that includes thoroughly exercised Disaster Recovery and Business Continuity Plans for all critical systems/processes.
IT-4	System and Software Lifecycle Management	\$300,000	Requires PSEG LI to maintain and upgrade all IT and operational technology assets managed on behalf of LIPA, including computers, communications equipment, networking equipment, hardware, software, and storage systems, to be within their active service life and under general support from the product vendor.
IT-5	System Implementation – 2022 Budget Projects	\$800,000	Requires PSEG LI to Improve System Implementation Performance to industry standards for projects at or over \$1 million in project lifecycle costs.
IT-6	System Implementation – Board PIPs	\$500,000	Requires PSEG LI to Improve System Implementation Performance to industry standards for projects related to LIPA Board-adopted recommendations.
IT-7	System Segregation	\$250,000	Requires PSEG LI to plan for and separate LIPA IT systems from PSEG New Jersey systems.
Compensation at Risk Based on Performance		\$3,000,000	

Metric		At Risk Compensation	Metric Objective & Deliverables
Power Supply Programs			
PS-1	Long Range Planning Studies - Integrated Resource Plan (IRP)	\$375,000	Requires PSEG LI to complete, per an agreed upon scope and schedule, deliverables associated with the development and issuance of the IRP.
PS-2	Long Range Planning Studies - Energy Storage Request for Proposal (RFP)	\$375,000	Requires PSEG LI to complete, on schedule, deliverables associated with the evaluation of proposals for the 180MW Energy Storage RFP.
Clean Energy Programs			
CE-1	Energy Efficiency Plan Savings	\$200,000	Requires PSEG LI achieve the Energy Efficiency Plan targeted savings in the Utility 2.0 filing.
CE-2	Utility 2.0 - Distributed Energy Resources (DER) Hosting	\$150,000	Requires PSEG LI to complete the hosting capacity study proposed in the Utility 2.0 filing.
CE-3	Beneficial Electrification - Building Electrification	\$200,000	Requires PSEG LI to achieve Beneficial Electrification Targets in the Utility 2.0 filing, including: Energy Efficient Products, Home Comfort, REAP (Low-Income), and Home Performance.
CE-4	Electric Vehicle (EV) Make-Ready	\$100,000	Requires PSEG LI to achieve the EV Make-Ready targets in the Utility 2.0 filing to accelerate development of EV charging stations.
CE-5	Distributed Energy Resources (DER) Interconnection Process	\$200,000	Requires PSEG LI to improve the DER interconnection process and pursuant to LIPA Board-adopted recommendations
CE-6	Time of Use (TOU) Pricing Pilots - Heating and Large Commercial	\$200,000	Requires PSEG LI to complete development of TOU Pricing Options for space heating and large commercial customers.
CE-7	TOU Pricing Pilot - Year 1 Marketing	\$200,000	Requires PSEG LI to engage and enroll 12,000 new customers in new TOU optional pricing plans.
Compensation at Risk Based on Performance		\$2,000,000	

Metric		At Risk Compensation	Metric Objective & Deliverables
Customer Service			
CS-1	Delivery of Project Implementation Plans	\$500,000	Requires PSEG LI to implement seven strategic customer projects to improve the customer contact and billing experience and drive top 25% utility performance, including implementing smart meter features, upgrading credit card vendors, enhancing the mobile app, and enhancing text messages of outage information.
CS-2	J.D. Power Residential Customer Survey	\$200,000	Requires PSEG LI to improve customer satisfaction for residential customers, as measured by the J.D. Power Residential Customer Survey, to 3rd quartile by 2022 year-end.
CS-3	J.D. Power Business Customer Survey	\$200,000	Requires PSEG LI to improve customer satisfaction for business customers, as measured by the J.D. Power Business Customer Survey, to 3rd quartile by 2022 year-end.
CS-4	Customer Information System (CIS) Modernization – Phase 1	\$600,000	Requires PSEG LI to plan for and deploy a new, flexible, modern CIS capable of effective and efficient customer transactions, billing, and services.
CS-5	Customer Transactional Performance	\$400,000	Requires PSEG LI to develop new customer transaction surveys to improve the satisfaction and cost of five (5) common customer transactions.
CS-6	Billing – Eliminate Long Term Estimates (LTEs) - Inactive Accounts	\$100,000	Requires PSEG LI to reduce the number of inactive accounts receiving estimated bills for more than 5 months by 90% and maintain accurate billing records.
CS-7	Billing – Eliminate LTEs - Active Accounts	\$100,000	Requires PSEG LI to reduce the number of customers receiving estimated bills for more than 3 months by 80%.
CS-8	Unauthorized Use/Advanced Consumption Resolution	\$100,000	Requires PSEG LI to reduce by 75% the number of unauthorized use of service cases in a timely manner and in compliance with the rules.
CS-9	Billing Exception Cycle Time	\$200,000	Requires PSEG LI to render 95% of customer bills within 3 days of the scheduled date, representing an improvement over the 3-year historical average performance level of 88%.
CS-10	Billing – Cancel Rebill	\$200,000	Requires PSEG LI to provide an accurate bill to the customer the first time, not requiring a subsequent adjustment, by reducing cancelled rebills by approximately 23%.
CS-11	Contact Center Service Level with Live Agent Calls	\$175,000	Requires PSEG LI to answer 80% of calls with a live agent within 30 seconds during blue sky days and within 90 seconds during storms. This is 2% better than the 3-year historical average performance.
CS-12	Customer Email Closure Rate	\$75,000	Requires PSEG LI to answer 70% of emails within 24 hours, an increase from historical average performance of 42%.
CS-13	First Call Resolution (FCR)	\$100,000	Requires PSEG LI to resolve at least 80% of calls on the first call, despite higher expected call volume in 2022.
CS-14	Net Write-Offs (Per \$100 Billed Revenue)	\$250,000	Requires PSEG LI to maintain the bad debt written off for the year below 0.77. This metric was impacted by the COVID-19 moratorium in 2020 and 2021.
CS-15	Accounts Receivable Aging > 90 Days Past Due (AR>90)	\$300,000	Requires PSEG to reduce the % of total receivables that are past due more than 90 days below 30.25%. This metric was impacted by the COVID-19 moratorium in 2020 and 2021.
CS-16	Days Sales Outstanding (DSO)	\$200,000	Requires PSEG LI to reduce the days of revenue billed but not yet collected to 39.9 days. This metric was impacted by the COVID-19 moratorium in 2020 and 2021.

CS-17	Low to Moderate Income (LMI) Program Participation	\$100,000	Requires PSEG LI to increase participation in the low-income rate discount program by 34% over the 3-year average to improve affordability for vulnerable customers.
CS-18	LMI Program Participation - Automation	\$100,000	Requires PSEG LI to improve the ease of enrollment in the low-income rate discount program by automatically enrolling categorically eligible customers.
CS-19	DPS Customer Complaint Rate	\$100,000	Requires PSEG LI to perform within the top quartile of its peer group for initial complaints made to the New York Department of Public Service (DPS) to measure whether customers concerns are effectively handled.
Compensation at Risk Based on Performance		\$4,000,000	

Metric		At Risk Compensation	Metric Objective & Deliverables
Business Services - Risk Management			
ERM-1	Enterprise Risk Management (ERM) Report	\$150,000	Requires PSEG LI to develop a comprehensive ERM report that documents the identification and management of the most high-priority risks across the organization that could impede the achievement of business goals and objectives.
ERM-2	ERM Key Risk Indicators (KRIs)	\$150,000	Requires PSEG LI to develop a Proof-of-Value Pilot on KRIs for select high-priority risks. This Pilot will enable more proactive monitoring of risks and provide early indicators when management action is warranted.
Business Services - Human Resources			
HR-1	Human Resources Employee Engagement -- Participation Rate	\$100,000	Requires PSEG LI to increase the rate of employee participation in the annual Employee Engagement survey to 49% or more, up from 46% today.
HR-2	Human Resources Employee Engagement -- Score	\$200,000	Requires PSEG LI to improve the employee rating scores in key areas by 4% year-over-year on the annual Employee Engagement Survey. The Engagement Survey results drive initiatives to attract and retain a motivated workforce.
HR-3	Human Resources Full Time Vacancy Rate	\$200,000	Requires PSEG LI to maintain an annual vacancy rate of no greater than 5% overall and no greater than 7% in IT. This metric requires delivering an approximate decrease in vacancy of 3% in Business Services, 34% in Customer Service, and 35% in IT from the June 2021 reported levels.
Business Services - Performance Measurement & Administration			
PMA-1	Contract Administration Manual (CAM) Completion	\$50,000	Requires PSEG LI to complete drafts and expedite reviews of the CAM. Completed CAMs will improve day-to-day coordination and communication between LIPA and PSEG LI on operational processes.
Business Services - Budgets			
BGT-1	Affiliate Cost Benefit Justification	\$250,000	Requires PSEG LI to justify the use and cost of work done on Long Island by NJ-based PSE&G affiliates. This initiative provides a framework to more closely examine the use of Affiliates compared to alternative methods of providing the same service. If an alternative method is determined to be more cost effective or to provide higher quality, this metric requires the development of an implementation plan resulting in savings or greater value to Long Island customers.
BGT-2	Capital Project Impact Analysis	\$100,000	Requires PSEG LI to provide an analysis of the full range of costs and benefits for significant capital projects. LIPA invests over \$700 million on capital projects per year. Many of these projects are large, in excess of \$25 million, and can result in ongoing operating costs and benefits. The objective of this metric is ensure that the promised financial and operational benefits are identified upfront and realized.
Business Services - Accounting			
ACC-1	Substation Property Tax Report	\$150,000	Requires PSEG LI to develop the first Substation Valuation Report on 120 substations, comparing assessed values to actual values for tax purposes.
ACC-2	Substation Property Tax Module Plan	\$50,000	Requires PSEG LI to research and map an additional 45 substations for future annual Substation Valuation Reports.

Business Services - Rates & Tariffs			
RT-1	Long Island Choice Reform	\$150,000	Requires PSEG LI to implement the reforms to the Long Island Choice program that were recommended by the DPS and adopted by the LIPA Board by the deadlines.
RT-2	Advanced Metering Infrastructure (AMI) Fees	\$100,000	Requires PSEG LI to implement accurate and timely billing of AMI fees associated with the substantial completion of AMI deployment.
Business Services - Legal Services			
LEG-1	Information Request (IR) Responses	\$150,000	Requires PSEG LI to respond to at least 90% of IRs from LIPA and DPS within 10 days.
LEG-2	Legal Staffing	\$150,000	Requires PSEG LI to implement the results of a LIPA study of the staffing of its Legal department, to ensure adequate staffing of attorneys and paralegals to effectively carry out PSEG LI's obligations on behalf of LIPA.
LEG-3	Contractor Performance Evaluation System	\$250,000	Requires PSEG LI to implement a contractor evaluation system to ensure LIPA is benefitting from suppliers who have demonstrated experience in cost controls, performance, quality, risk management, and collaborative efforts to promote innovation and transformation.
Business Services - Performance Measurement & Administration			
E&C-1	Government & Legislative Affairs	\$100,000	Requires PSEG LI to develop a system to ensure proposed legislation is effectively monitored and that Long Island customers do not pay for lobbying related to PSEG corporate priorities.
E&C-2	Capital Project Outreach	\$200,000	Requires PSEG LI to deploy a survey to evaluate capital project outreach and implement process improvements.
E&C-3	Customer Segmentation and Consumer Priorities	\$100,000	Requires PSEG LI to develop targeted marketing and communications to drive measurable increases in program awareness of the household assistance rate, digital payments, and pay station payments and use customer segmentation to improve future marketing.
E&C-4	Reputation Management - Positive Media Sentiment	\$100,000	Requires PSEG LI to achieve at least 28% positive sentiment in media stories as measured by an independent third-party evaluation, up from 14.5% today.
E&C-5	Reputation Management - Share of Voice	\$100,000	Requires PSEG LI to achieve at least 50% "share of voice" in media during storms and emergency events.
E&C-6	Social Media Engagement and Response Rate	\$200,000	Requires PSEG LI to respond to 90% of social media inquiries related to personal health and safety with a live agent within 2 hours on blue sky days and 80% within 3 hours during major storms. Requires 90% of all other inquiries to be responded to with a live agent within 4 hours on blue sky days and 80% within 5 hours during major storms.
Compensation at Risk Based on Performance		\$3,000,000	

