LIPA-PSEG Long Island 5-Year Strategic Roadmap (2023 to 2027)

February 15, 2023

LIPA
Long Island Power Authority

STRATEGIC PLANNING PROCESS & OBJECTIVES

Strategic Plan Objectives

- Develop a longer-term planning horizon (thinking beyond 2023 performance metrics and work plan)
- Ensure coherence among Board policies, strategic priorities, and system/project investments
- Build shared buy-in and ownership across LIPA and PSEG Long Island
- Establish a logical and practical timeline to guide implementation
- Estimate financial resource requirements to support prioritization

Strategic Planning Approach

- Interviews inside LIPA and PSEG Long Island to identify and prioritize current gaps, pain points, and potential solutions
- External interviews to understand evolving practices and priorities of industry leading utilities
- Sessions with LIPA and PSEG Long Island management to validate findings and sequence implementation

THE PROCESS HAS INCORPORATED A RANGE OF INTERNAL AND EXTERNAL PERSPECTIVES

LIPA

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20. Tom Welsh
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22. Greg Player
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24. Ed Orellana
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26. Wayne Baldassari
27. Dan Wickstrom
28. Benjamin Rudolph
29. Anthony Vota
30. Meena Malhotra
31. Prem Patel
32. Richard Tinneli
33. Carmine Mileo
34. Mohammed Yousuf
35. John Savin
36. James McNamara
37. John Oates
38. John McCumiskey
39. Pat Dempsey
40. Jorge Jiminez
41. John Keating
42. Kim Soreil
43. Christina Nathan
44. Phil Deccico
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46. Jeff Sills
47. Joe Lamotta
48. Tony Anton
49. James Myers
50. Nayan Parikh
51. John Ng
52. Steve Pussateri
53. Demetrio Thanasoulis
54. John Kupcinski
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Consultants & Industry Experts

1. Albair Hanna (tieBridge)
2. Michael Sullivan (PA Consultants)
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4. Tim Fields (ISG)
5. Jeremy Laundergan (Ennernex)
6. Ben Rankin (Ennernex)
7. Eric Douglas (Leading Resources)
8. Karin Bloomer (Leading Resources)
9. John Shaefer (ISG)

Other Utilities

1. SMUD / Large Public Power Council (John DiStasio)
2. Florida Power and Light (Ron Critteli)
3. Orlando Utilities (Jan Aspuru)
4. Salt River Project (James Pratt)
5. Duke Power (Carol Edelman)
6. JEA (Ricky Erixton, Gabor Acs)

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SUMMARY OF STRATEGIC OBJECTIVES

Transmission & Distribution

- Adopt a programmatic approach to **asset management**
- Apply **modern system design and innovative technology**
- Facilitate **interconnection of renewable and distributed resources**
- Reduce **outages caused by storms and other emergencies**
- Protect the LIPA grid from **natural hazards and unauthorized access and disruption**

Customer Experience

- Use **customer and operational data** to enhance customer transactions
- Optimize customer **channel experience** and **self-service** utilization
- Modernize core **customer systems**
- Improve **energy affordability** through rate design and targeted programs
- Provide **proactive and personalized communications** and **customized offerings**
- Strengthen **customer operations capacity**

Finance

- Decrease LIPA's financial **leverage and cost of capital**
- Advance a **"value for money" culture** by strengthening budgets, financial plans, and financial reporting
- Enhance LIPA's **financial management capabilities** (treasury, insurance, financial forecasting)

Information Technology (IT)

- Ensure that **systems implementations** deliver business benefits on time and on budget
- Establish **dedicated IT systems and support organizations** for Long Island
- Ensure technology platforms are **robust and operationally stable**
- Protect IT systems and data from **unauthorized access and disruption**
- Strengthen **long-term systems planning**
- Strengthen the **capacity of the IT organization**

Performance Management

- Ensure that **performance management mechanisms in the 2nd A&R OSA** are successfully implemented (IV&V, metrics, performance evaluation)
- Create a **performance management culture** across LIPA and PSEG Long Island
- Ensure that future management arrangements reflect **LIPA's accumulated knowledge and experience** on performance management
- **Prepare for the potential transition of PSEG affiliate functions** at the end of the current contract

KEY INITIATIVES – T&D

	Business Benefits	Customer Benefits	Timeline
Enterprise Asset Management System (EAMS)	• Improve work management • Track all LIPA assets • Improve asset utilization • Support long-term capital planning • Optimize asset maintenance strategy • Improve inventory management practices	• Better reliability • Cost savings	**Phase I** • System Design in 2023 • Implementation in 2024 **Phase II (Asset Investment Planning)** • System Planning 2024 • Implementation 2025
Advanced Distribution Management System (ADMS)	• Provides next-generation system visibility and control capabilities (e.g., Volt-Var; fault location, isolation, and service restoration (FLISR); switch management) • Reduces distribution system losses	• Improves system performance • Improves outage restoration	**Phase I** • Planning in 2023 • Implementation 2024-2025 **Phase II** • Planning 2025 • Implementation 2026-2027
Transmission Control Center Upgrade	• Modernize aging primary and alternate transmission control center • Expand system capabilities • Mitigate emerging cyber security threats	• Improves system security and resilience	• Planning 2023 • Facility construction 2024-2025 • Relocate existing PTCC to new facility in 2025
Physical Security and Protection Program	• Improves physical security, including people, processes, tools, and technology utilizing industry best practices • Strengthens administrative and technical controls • Improves compliance with regulatory agency requirements for control centers, substations, and operation centers	• Improves system security and resilience	• Comprehensive vulnerability assessment in 2023 • Physical protection program design and implementation 2023-2025

KEY INITIATIVES – CUSTOMER EXPERIENCE

	Business Benefits	Customer Benefits	Timeline
Customer Information System Modernization (CIS)	• Modernize a 1970's era customer systems architecture • Better revenue and financial controls • Add service features/rate changes faster and at lower cost	• Brings multiple capabilities for better serving customers (e.g. customer data visibility, personalization of offerings, efficient change to service)	• Planning 2023-2024 • Implementation 2025-2026 • Go live with new CIS platform 2026
Customer Contact Center Modernization (CCaaS)	• Replaces disparate on-premises systems with a fully integrated cloud-based contact center solution • Expands call handling capacity • Provides a new analytics engine to gauge customer sentiment • Improves IVR containment • Reduce overall costs	• Allows customers to seamlessly transition between channels • Enables 24/7 customer self-service	• Go live with full functionality in 2023 • Ongoing system enhancements 2024-2026
Time-of-Day (TOD) Rollout	• Reduces peak energy demand, emissions and system investment needs • Facilitates integration of distributed energy resources	• Allows customers to reduce energy costs by shifting consumption to cheaper off-peak hours	• Marketing, outreach, and development of IT and customer tools in 2023 • Residential customers transition to TOD rates in 2024 • Modernize commercial rates in 2025

KEY INITIATIVES – FINANCE

	Business Benefits	Customer Benefits	Timeline
Financial Deleveraging	• Leads directly to credit rating upgrades and lower borrowing costs	• Delivers substantial savings for customers (over $600M in savings since 2015)	• Long-term target of 70 percent debt-to-assets ratio by 2030 • Potential for a fifth credit rating upgrade in 2024 or 2025
Business Process Optimization	• Establishes a dedicated team and systematic approach for identifying business process improvements and savings opportunities in collaboration with operational teams • Tracks progress on cost reduction and process improvement initiatives over time • Builds realized cost savings into steady-state operating budgets	• Drives cost efficient operations and customer savings	• Establish a Business Process Optimization practice in LIPA in 2023 and complete up to three business process reviews
Budget System Modernization	• Streamlines existing processes • Introduces new functionalities, including scenario development, automated reporting, and near real-time visibility into cost variances	• Provides better data and information for budgetary decision making, leading to better stewardship of customer resources	• Currently under implementation, to be completed in 2023

KEY INITIATIVES – INFORMATION TECHNOLOGY (IT)

	Business Benefits	Customer Benefits	Timeline
IT Systems Separation	• Focuses the development and management of IT systems on LIPA's specific business needs • Strengthens accountability for Long Island systems performance • Increases flexibility for potential management transitions	• Systems functionality tailored to LIPA customer needs • Potential to reduce long-term costs borne by customers	• Already in progress • Completion by year-end 2024
IT Organizational Maturity	• Evaluates organizational maturity against industry standard benchmarks • Applies industry best practices and processes	• Improves system reliability and resilience	• Implementation of Capability Maturity Model Integration (CMMI) Level 3 processes in 2023 • CMMI process benchmark appraisal in 2024 • Information Technology Infrastructure Library (ITIL) maturity model assessment in 2024
Long-Term IT Systems Planning	• Anticipates future business needs • Ensures that investments in IT modernization are pursued strategically and coherently • Addresses core technology vendor partners and long-term IT architecture and systems integration issues	• Systems that anticipate and meet changing customer needs • Better value for money from long-term investments of customer resources	• Data center and cloud strategy in 2023 • Enterprise-wide data warehousing and analytics strategy in 2023 • Mobile framework, standards, and guidelines in 2023 • Long-term systems replacement and technology modernization strategy in 2025

KEY INITIATIVES – PERFORMANCE MANAGEMENT

	Business Benefits	Customer Benefits	Timeline
Implementation of OSA-required Performance Management Mechanisms	• Equips LIPA staff to effectively lead key performance management processes, including independent validation and verification of critical IT systems, use of compensation-linked performance metrics, and LIPA's input to PSEG Long Island's manager performance evaluation	• Improved incentives and accountability for utility management performance	• Development of guiding frameworks, training, and tools in 2023
Quality Standards	• Sets clear performance expectations for PSEG Long Island for key work products and project management performance	• Improved quality and cost efficiency of utility operations	• Quality standards for 5 key work products (e.g., project plans, budget proposals) and project management performance to be developed in 2023 • Standards for additional work products and processes to be progressively added in subsequent years
Integrate lessons learned on performance management into the contractual framework of the next OSA	• Ensures that the next OSA reflects LIPA's accumulated knowledge and experience on performance management	• Improved long-term performance of LIPA management service providers	• Take stock of lessons learned in 2023 • Integration into vendor selection process and OSA contractual framework in 2024

FINANCIAL RESOURCE REQUIREMENTS

TRANSMISSION & DISTRIBUTION

** In millions of 2023 dollars*

Major Strategic Initiatives	2023	2024	2025	2026	2027	2023-2027 Total
Storm Hardening Program	83.0	75.0	75.0	75.0	75.0	**$383.0**
Distribution Circuit Improvement Program (CIP)	15.3	16.8	17.6	18.5	19.4	**$87.8**
Distribution Multiple Customer Outages (MCO)	8.3	8.1	8.5	8.9	9.4	**$43.2**
Transmission Control Center Replacement	9.3	37.7	45.3	1.4	10.1	**$103.7**
Enterprise Asset Management System (EAMS)	8.3	18.0	20.0	7.0	3.0	**$56.3**
Physical Security & Protection Program	7.9	6.8	5.5	5.5	0.5	**$26.2**
Advanced Distribution Management Sytems (ADMS)	2.6	4.3	4.0	5.0	6.0	**$21.8**
Distributed Energy Resource Management Systems (DERMS)	2.9	3.2	5.2	5.0	-	**$16.2**
Vegetation Management System	-	1.0	4.0	1.0	1.0	**$7.0**
T&D TOTAL	**$137.5**	**$170.9**	**$185.1**	**$124.5**	**$124.5**	**$745.3**

CUSTOMER EXPERIENCE

Major Strategic Initiatives	2023	2024	2025	2026	2027	2023-2027 Total
Customer Information System Modernization (CIS)	2.0	5.0	25.0	40.0	10.0	**$82.0**
Time-of-Day Rate Rollout	4.8	0.8	0.5	-	-	**$6.1**
Customer Contact Center Modernization	5.9	-	-	-	-	**$5.9**
CUSTOMER EXPERIENCE TOTAL	**$12.7**	**$5.8**	**$25.5**	**$40.0**	**$10.0**	**$94.0**

FINANCIAL RESOURCE REQUIREMENTS

FINANCE

Major Strategic Initiatives	2023	2024	2025	2026	2027	2023-2027 Total
Enterprise Resource Planning System Replacement (ERP)	-	-	2.0	10.0	20.0	$32.0
Budget & Treasury Systems Modernization	2.0	1.0	1.0	1.0	-	$5.0
FINANCE TOTAL	**$2.0**	**$1.0**	**$3.0**	**$11.0**	**$20.0**	**$37.0**

INFORMATION TECHNOLOGY

Major Strategic Initiatives	2023	2024	2025	2026	2027	2023-2027 Total
Cybersecurity Systems Enhancements	14.2	7.9	6.4	5.7	0.7	$34.8
IT Systems Separation	12.0	8.0	1.2	-	-	$21.2
Standard Data Platform & Analytics	3.8	3.8	3.8	1.0	1.8	$14.2
Enterprise Document Management System	3.2	8.0	2.0	-	-	$13.2
Geographic Information System	-	3.0	2.0	1.0	1.0	$7.0
Construction Portfolio Management System	2.2	1.0	1.0	0.5	0.5	$5.2
CUSTOMER EXPERIENCE TOTAL	**$35.4**	**$31.7**	**$16.4**	**$8.2**	**$4.0**	**$95.6**

Total Capital Expenditures for Major Strategic Initiatives	$187.6	$209.3	$230.0	$186.5	$158.5	$971.8

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This visual represents capital expenditure estimates (in 2023 dollars) for major strategic initiatives, defined as initiatives expected to exceed $5 million in capital investment over the 2023 to 2027 planning period. These high-level estimates are preliminary and intended only as guidance to inform cost and value tradeoffs and resource prioritization. Many of the initiatives are still in the early planning stages; resource estimates will continue to be updated as the project scope is further defined. In some areas, formal assessments will be conducted over the next two years. Depending on the findings of these studies, additional major capital initiatives could be pursued. The estimates do not represent a full costing, as operating cost impacts are not included. LIPA's budgeting processes will identify full operating and capital cost implications – including cost savings from operating efficiency gains – at the level of individual initiatives, which will be submitted to the LIPA Board for review and approval.

PLANNED INITIATIVES ALIGN WITH BOARD POLICIES

Board Policy on T&D Operations

"achieve industry leading reliability"

- Asset Management Program (EAMS + ISO 55001)

"protect facilities that support operations"

- Physical Security & Protection Program

"facilitate connection of renewable and distributed resources"

- DER Program Development
- DERMS Implementation

"utilize modern system design and technology"

- Adv. Distribution Mgmt. System
- Transmission Control Center Upgrade

Board Policy on Customer Experience

"invest in technologies to enhance service"

- Customer Information System Modernization
- Customer Contact Center Modernization

Board Policy on IT & Cyber Security

"ensure the capacity of the IT organization to deliver reliable, robust, and resilient systems"

- IT Organizational Maturity Initiative

"ensure secure technology platforms ... and protect customer, employee, and third-party data"

- Cyber Security Maturity and Vulnerability Assessment Programs

Board Policy on Affordability & Rate Design

"employ innovative electric rate design...
provide customers opportunities to save money...
encourage conservation"

- Time-of-Day Rate Rollout

"aggressively manage costs"

- Business Process Optimization Practice

Board Policy on Fiscal Sustainability

"decrease LIPA's leverage and cost of capital"

- Deleveraging Program

"develop budgets and financial plans that maximize customer value"

- Budget System Modernization

"provide financial reporting that drives sound business decisions"

- Integrated Operational and Financial Performance Monitoring Framework

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Illustrative; does not include all planned initiatives

February 15, 2023

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5 - YEAR STRATEGIC ROAD MAP

2023-2027

LIPA Long Island Power Authority | PSEG LONG ISLAND

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TABLE OF CONTENTS

About LIPA 3

Executive Summary 5

Background and Context 7

Strategic Priorities 9

1. Transmission & Distribution
2. Customer Experience
3. Finance
4. Information Technology
5. Performance Management

Financial Resource Requirements 17

Risks and Mitigation 19

Appendix A: 5-Year Functional Roadmaps 20

1. Transmission & Distribution
2. Customer Experience
3. Finance
4. Information Technology
5. Performance Management

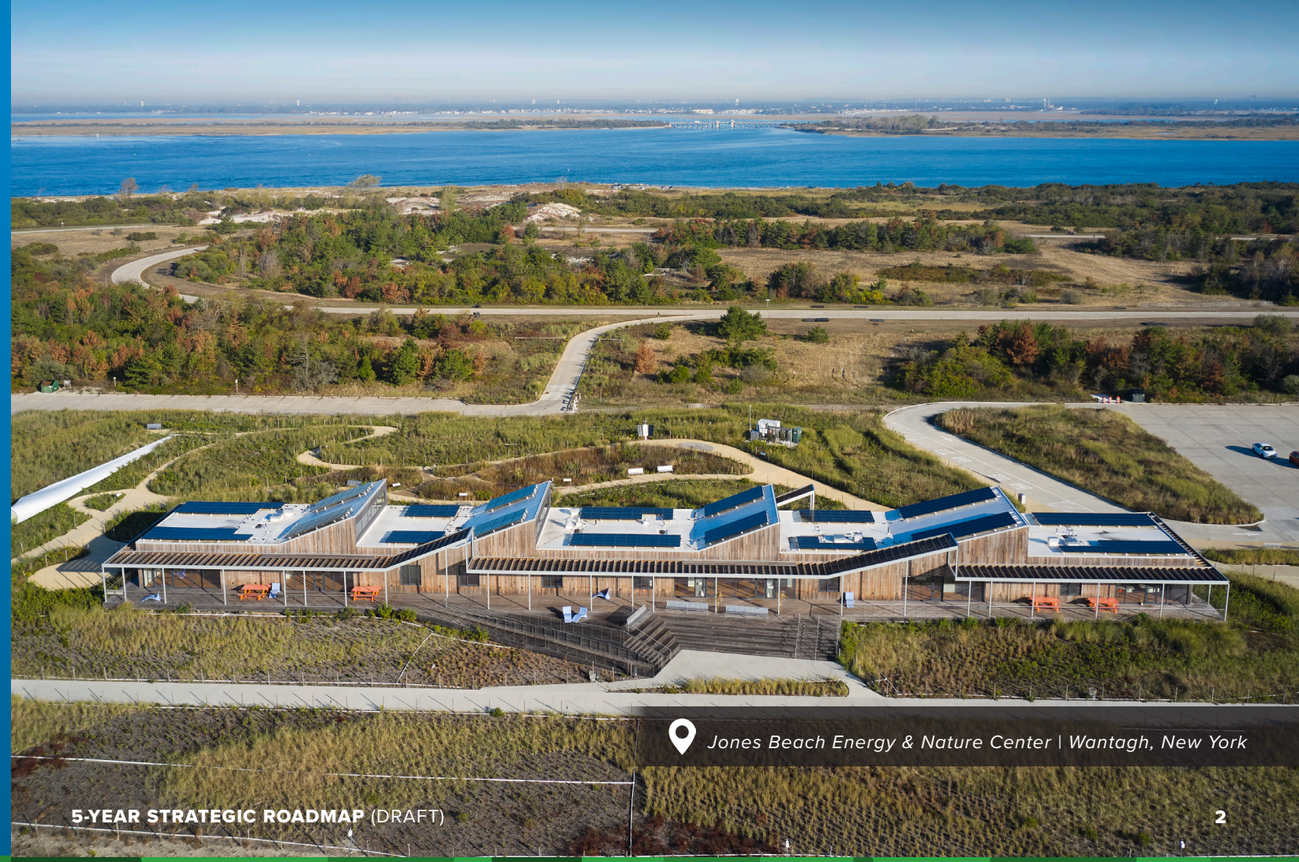
ABOUT **LIPA**

The Long Island Power Authority (LIPA) is the third-largest public power utility in the United States, serving 1.2 million customers on Long Island and the Rockaway Peninsula in Queens.

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 every action and decision.

LIPA is the owner of the electrical transmission and distribution (T&D) system serving our community; however, we contract for most of the management services and power supply used to operate our electric grid. Since 2014, LIPA has contracted with PSEG Long Island for management services, and LIPA provides service to customers under the PSEG Long Island brand name.

The LIPA Board of Trustees contracts with vendors; sets policy, strategy, and performance metrics for PSEG Long Island's service to our customers; finances the infrastructure investments necessary for a reliable electric grid; and leads Long Island's transition to a clean energy future.



Jones Beach Energy & Nature Center | Wantagh, New York

Governance Model

LIPA is governed by a local **Board of Trustees** consisting of customers. 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 for staggered four-year terms. 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.

Board Policies Establish LIPA's Strategic Direction

The LIPA Board of Trustees provides strategic direction to LIPA's Management through a set of Governance Policies. The Board's policies define LIPA's purpose and vision and set expectations for the strategic outcomes that management will deliver in the areas of reliability, customer experience, information technology, clean energy, affordability, and fiscal sustainability. The Board reviews each of its policies annually, and LIPA management reports on outcomes in reports to the Board for each policy. Figure 1 summarizes the key objectives set by the Board.

For more information about the Board's policies, visit **lipower.org/purpose**.

Figure 1**: LIPA's Key Policy Objectives**

1 Reliability and Resiliency

- Top 10% reliability among peer utilities
- Improve circuit conditions that cause repeated customer outages
- Invest in system resiliency to reduce outages and restoration times from severe weather
- Independently verify and validate PSEG Long Island's emergency restoration planning

2 Customer Experience

- Deliver top 25% customer satisfaction in J.D. Power studies
- Continual improvement in ease of customer interaction, as measured by customer surveys
- Invest in technology to enhance the convenience of billing, payments, appointments, emergency restorations, etc.

3 Information Technology and Cybersecurity

- Deploy modern grid management technology and data analytics benchmarked to the top 25% of utilities
- Protect digital infrastructure and customer data, as measured by an annual independent assessment of cybersecurity practices
- Clearly communicate customer information collection policies

4 Clean Energy

- 70% renewable energy by 2030
- Zero-carbon electric grid by 2040
- Encourage beneficial electrification of transportation and buildings (i.e., electric vehicles and cold climate heat pumps)

5 Customer Affordability

- Maintain regionally competitive electric rates
- Prioritize investments to balance cost and service quality
- Maintain affordable electric bills for low-income customers and disadvantaged communities

6 Fiscal Sustainability

- Achieve AA-category credit ratings by reducing LIPA's debt-to-assets ratio from 90%+ to 70% or less by 2030
- Maximize grants and low-cost funding sources
- Develop budgets and financial plans that maximize customer value and aggressively manage costs
- Provide LIPA's customers and investors with timely, transparent, accurate, and useful information to evaluate LIPA's financial performance and plans

EXECUTIVE SUMMARY

LIPA measures our performance relative to the strategic outcomes established in **policy** by our Board of Trustees. The Board's policy expectations encompass all the core operational areas of an electric utility, including:

- A highly **reliable** and **resilient electric grid** among the top 10 percent of peer electric utilities;
- An **aggressive clean energy transition** to a carbon-free electric grid by 2040, while supporting customers' transition to more efficient forms of transportation and heating, such as electric vehicles and heat pumps;
- An **outstanding customer experience** among the top 25 percent of electric utilities; and
- Electric service at the **lowest possible cost**, through efficient operations and plans that maximize customer value.

Long term strategic planning is foundational to meeting the objectives set by the LIPA Board and managing the pace of change in the electric utility industry. Transitioning to a carbon-free electric grid, for example, requires adding new clean energy sources, retiring older fossil-fueled power plants, building transmission to integrate changing power flows, and deploying in scale many new and emerging technologies.

In Long Island and elsewhere, extreme weather events and emerging cyber and physical security risks are necessitating new solutions for system resiliency. Customer expectations are evolving. Shaped by their experiences in other industries, customers increasingly demand a personalized and digitally driven experience, with customized offerings and easy, real-time communication. These trends are occurring during a period of economic uncertainty. Rate affordability and stability goals are challenged by broad-based inflation and the costs to modernize the grid and prepare for continued electrification of transport, heating, and industry.

At the same time, traditional aspects of utility operations remain critically important. Even within a more dynamic business environment, core tenets of our commitment to customers remain steadfast. This means getting the basics right by managing costs, maintaining the electric grid, responding quickly to storms and other emergencies, and efficiently resolving customer concerns. But even here, industry dynamics play an important role. Advancing tools and technologies can help LIPA manage these longstanding operational priorities more effectively and cost efficiently – basics done better.

This strategic plan (the 'plan' or 'roadmap') positions LIPA to better deliver on its core commitment to a customer-first utility for Long Island and the Rockaways *and* to respond to emerging opportunities and challenges. The plan sets priorities for limited time and resources over the next five years (2023-2027) and provides an opportunity for LIPA and PSEG Long Island to collaboratively look at the landscape in which the utility operates to address current challenges, leverage advancing technology, and respond to evolving customer needs. The plan focuses on five foundational business areas – Transmission and Distribution (T&D); Customer Experience (CX); Finance; Information Technology (IT); and Performance Management – and draws upon internal and external perspectives to establish a guiding, long-term strategic vision for the utility. Additionally, during 2023, LIPA will complete an Integrated Resources Plan to establish the pathway to a carbon-free electric grid by 2040 and will evaluate opportunities and complete plans for certain business service areas, such as human resources, legal, communications, procurement, external affairs, and other support functions.

Over the next five years, LIPA and PSEG Long Island will implement projects and initiatives that deliver on the LIPA Board's vision for our customers in Long Island and the Rockaways.

Our focus will be on improving the product we deliver to our customers. We will leverage customer feedback and operational data to design intuitive and efficient customer interactions and enhance transaction performance. Priorities include streamlined billing and payment processes and convenient self-service options. Customers will receive timely and accurate communications about outages and restoration and offerings will be customized to individual customer needs and preferences. Upgrades to core customer information and contact center systems will drive these performance enhancements.

We will further strengthen system reliability and resilience. LIPA has invested a record $5.7 billion in infrastructure since 2016, leading to significantly improved system performance. Customers experiencing power outages have fallen 37 percent, and the utility ranks among the top 10 percent nationally in reliability. LIPA will further enhance the T&D system by applying modern system design and innovative technology, and, importantly, by ensuring LIPA's T&D assets are consistently well managed and maintained. New smart grid technologies and grid analytics, enhanced vegetation management practices, and a stronger emphasis on emergency response preparedness are among the planned improvements to grid reliability and resiliency. LIPA will deliver these improvements while maintaining industry-leading performance in worker safety.

We will advance Long Island's transition to a clean energy future. Our customers are adopting clean technologies like rooftop solar, heat pumps, home energy storage, and electric vehicles. Electrification and Distributed Energy Resource (DER) integration creates a unique opportunity for progress on clean energy goals and heightens the need for customer programs, tools, and pricing strategies to manage increasing demands on the electrical system. LIPA will invest in systems and grid modernization to accommodate the growing number of distributed energy resources and electrification of heating and transportation.

We will enhance customer affordability and ensure fiscal sustainability. To maintain stable and regionally competitive rates, LIPA will not only rigorously optimize business costs but will also ensure that planned projects deliver real value for customers. A new Time-of-Day (TOD) rate, developed with extensive stakeholder input, will help customers save money by giving them the flexibility to shift their power consumption to times when energy is cheaper to produce. LIPA is especially committed to affordability for our most vulnerable customers and will increase program participation and bill discounts for low- to moderate-income customers. LIPA will also continue its ongoing efforts to bring financial leverage in line with industry norms and lower the utility's cost of capital.

We will only meet our goals if planning is met by effective execution. LIPA is the owner of the electrical system serving our community; however, we contract with PSEG Long Island for most of the management services used to operate the electric grid. This requires a strong and disciplined emphasis on the performance of our vendors in delivering the Board's objectives. Consistent with the reformed PSEG Long Island contract adopted in April 2022, LIPA will strengthen its capabilities for effective oversight. In addition to performance management, project management will also be a core focus over the next five years. Many of our strategic priorities involve deployment of advanced technology. We will strengthen skills and processes to plan, develop, and manage complex project implementations within IT and other functional areas.

This five-year strategy will serve as a valuable guide now and for the future, but it cannot be a static document in a dynamic business context. We will revisit and refresh the plan annually to ensure that our priorities continue to reflect evolving customer needs and industry best practices, and changes to LIPA's operating environment and the Board's priorities.

BACKGROUND AND CONTEXT

OBJECTIVES

This plan has five key objectives:

1. **Prioritization**. In an environment of dynamism and constrained resources, we must pinpoint our efforts based on what produces the most value for customers. This means having clear decision criteria and being selective not only in terms of where we invest financial resources, but also where we focus management attention. The sections below focus on initiatives that will most move the needle on utility performance and customer experience.

2. **Strategic Alignment**. In addition to ensuring alignment with LIPA Board directives, this plan provides a shared strategic agenda to guide LIPA and PSEG Long Island's joint efforts, shaping how LIPA and PSEG Long Island will work together to set priorities, allocate resources, guide implementation, and monitor success.

3. **Implementation Timing and Sequencing**. The plan's ultimate value depends on its successful implementation. Given multiple priorities, implementation timelines must anticipate interdependencies among initiatives and accommodate organizational bandwidth and capacity constraints. This document lays out a sequenced approach over the next five years that balances the implementation demands of individual projects within the context of the broader portfolio of planned initiatives.

4. **Resourcing**. The plan provides high-level estimates of the financial resources required to deliver key initiatives. These estimates are indicative to inform long-term capital and budget planning, and do not replace more detailed costing analyses that will be developed at the project level and reflected in annual budgets.

5. **Risk Mitigation**. Risk mitigation planning can anticipate and limit the impact of potential threats to successful implementation. This document identifies several categories of risk and defines steps LIPA will take to prevent or mitigate adverse impacts on plan priorities.

SCOPE

This plan focuses on five critical business pillars: Transmission and Distribution (T&D); Customer Experience; Finance; Information Technology; and Performance Management. T&D, Customer Operations, and Finance are foundational business functions for an electric utility, providing a resilient and reliable power grid, efficient and effective customer transactions and services, and the financial resource management to ensure affordable rates and fiscal sustainability. IT partners with T&D, customer, finance, and other functional areas to deliver the robust and secure systems functionality necessary in a modern utility. Performance Management is also essential to meeting Board objectives. LIPA's business model relies heavily on PSEG Long Island to manage day-to-day utility operations. Success of this business model requires established standards and metrics to ensure consistent vendor performance across multiple business domains and a culture of continuous improvement.

LIPA's Integrated Resource Plan (IRP) and future planning initiatives will address other important aspects of the business. LIPA and PSEG Long Island launched an IRP in June 2021 to study supply- and demand-side resources for electric power for Long Island and the Rockaways. The IRP will ultimately result in an action plan that will identify the key activities and investments that LIPA will need to make over the next eight years, including planning for the expiration of major power purchase contracts and retiring fossil-fueled generation, integrating substantial amounts of renewable energy, and identifying the impacts of and supporting beneficial electrification. IRP preliminary results will be available in the first quarter of 2023 and opportunities for public comment will follow. Also in 2023, LIPA and PSEG Long Island will develop a five-year strategic roadmap for Business Services, covering human resources, legal, communications, procurement, external affairs, and other functional areas.

This five-year plan will inform and be complemented by annual budget and project-level planning efforts. The goal of this effort is to articulate a long-term plan that provides a utility-wide view of priority initiatives and coordinated timing. The five-year plan will inform, but is not a substitute for, the more granular project planning tools and mechanisms already in place. The five-year plan will be translated into annual work plans, performance metrics, and budgets for the Board's review and approval. The annual work plan defines the activities to be undertaken during the year, while the performance metrics define the objectives that determine PSEG Long Island's variable compensation for the year. Budgeting and capital project review processes will ensure that tradeoffs of cost and business benefits are weighed at the project level, yielding right-sized solutions that meet customer needs and demonstrate stewardship of customer resources. These project-level processes could result in changes to the scope of individual projects and LIPA's overall project portfolio. LIPA will play a key oversight role in each of these processes.

METHODOLOGY

The priorities and initiatives that follow are drawn from extensive internal and external consultations. A small team of technology and business strategy consultants from tieBridge Inc. and GivingWorks Inc. advised and supported this effort, conducting consultations with 90 individuals, including LIPA and PSEG Long Island management and staff, external industry experts, and representatives of other industry-leading utilities. The mix of internal and external perspectives provides broad awareness of key industry trends and emerging best practices while ensuring that they are evaluated based on the specific nature and needs of the Long Island context, and that new opportunities complement and build upon LIPA and PSEG Long Island's already planned initiatives.

STRATEGIC PRIORITIES

Figure 2 summarizes the overarching strategic goals for the planning period within T&D, Customer Experience, Finance, IT, and Performance Management. The sections below provide further context on priorities for each of the focal business areas, and the appendix to this document provides detailed implementation roadmaps for each business area, laying out the key initiatives and sequence of activities for the next five years.

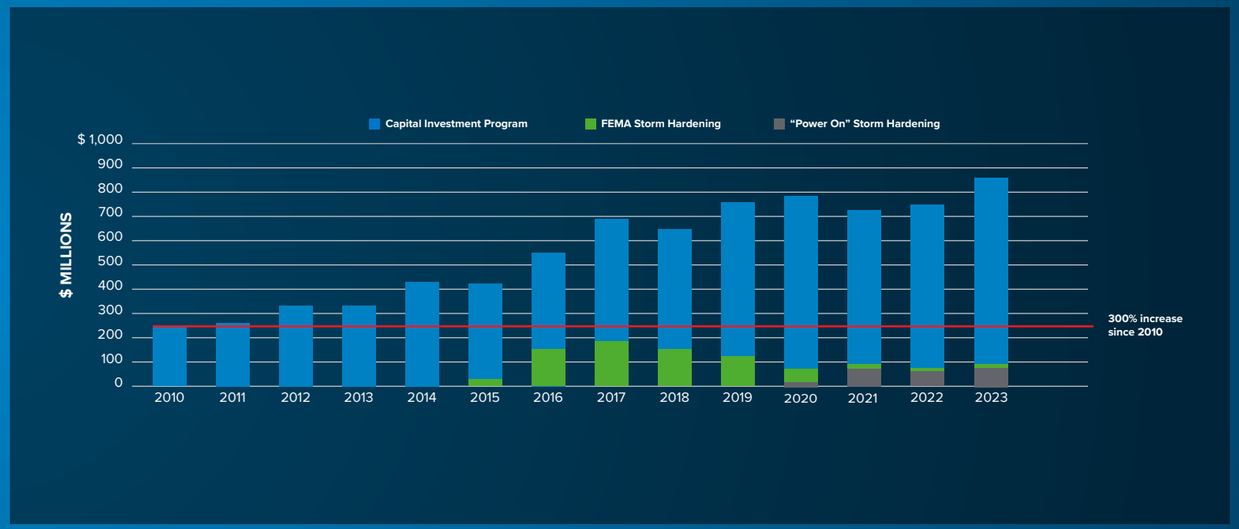
Figure 2**: Summary of Strategic Goals for 2023 - 2027**

Transmission & Distribution	Customer Experience	Finance	Information Technology	Performance Management
• Adopt a programmatic approach to **asset management** • Apply **modern system design and innovative technology** • Facilitate **interconnection of renewable and distributed resources** • Reduce **outages caused by storms and other emergencies** • Protect the LIPA grid from **natural hazards and unauthorized access and disruption**	• Use **customer and operational data** to enhance customer transactions • Optimize customer **channel experience and self-service** utilization • Modernize core **customer systems** • Improve **energy affordability** through rate design and targeted programs • Provide **proactive and personalized communications and customized offerings** • Strengthen **customer operations capacity**	• Decrease LIPA's financial **leverage and cost of capital** • Advance a "**value for money**" **culture** by strengthening budgets, financial plans, and financial reporting • Enhance LIPA's **financial management capabilities** (treasury, insurance, financial forecasting)	• Ensure that **systems implementations** deliver business benefits on time and on budget • Establish **dedicated IT systems and support organizations** for Long Island • Ensure technology platforms are **robust and operationally stable** • Protect IT systems and data from **unauthorized access and disruption** • Strengthen **long-term systems planning** • Strengthen the **capacity of the IT organization**	• Ensure that **performance management mechanisms in the 2nd A&R OSA** are successfully implemented (IV&V, metrics, performance evaluation) • Create a **performance management culture** across LIPA and PSEG Long Island • Ensure that future management arrangements reflect **LIPA's accumulated knowledge and experience** on performance management • Prepare for the **potential transition of PSEG affiliate functions** at the end of the current contract

1 Transmission & Distribution

Above anything else, customers want reliable electric service**. LIPA has invested a record $5.7 billion in infrastructure since 2016 – over three times the level of investment of a decade ago** (Figure 3) – leading to significantly improved outcomes, including a 37% reduction in customers experiencing power outages. The utility now ranks in the top 10 percent nationally in reliability.

Figure 3**: Capital Investments in the LIPA Electric Grid Are Up 300%**



Over the next five years we will continue to implement initiatives that improve electric grid reliability and resiliency. Strengthening the management of LIPA's T&D assets will be a central focus. A new comprehensive asset management program, consistent with industry standards and best practices, will identify the necessary skills and organizational capabilities and align people, processes, and technology to improve management of assets, data, and work practices. A new end-to-end Enterprise Asset Management Systems (Box 1) will provide information and analytics to optimize tradeoffs of cost, performance, and risk. These investments in asset management will deliver cost savings through enhanced operational and workforce efficiency and will also improve customer satisfaction and overall system performance.

Electric grid technology continues to advance, and LIPA will adopt modern system design and innovative technologies that deliver cost effective performance enhancements. We will implement a new Advanced Distribution Management System and modernize the Transmission Control Center to improve real-time visibility, situational awareness, and control of LIPA's distribution and transmission grids. We will also deploy advanced protection and control systems to address circuit conditions that cause repeated customer outages. A greater reliance on data from multiple sources will further improve operational efficiency, system reliability, and safety.

LIPA's customers are increasingly adopting distributed energy resources (DER) such as electric vehicles, rooftop solar, and energy storage. Over the next five years, we will facilitate the interconnection of renewable and distributed resources while ensuring reliable T&D system performance. This will entail scalable customer DER programs and interconnection rules, a modern Distributed Energy Resource Management System to provide greater visibility into all DERs on the LIPA grid, and enhanced DER forecasting and planning tools to optimize system hosting capacity.

Long Island and the Rockaways remain vulnerable to major storms, and we will redouble our efforts to reduce both the number and duration of outages caused by storms and other emergencies. Investments in hardening of transmission supply and distribution circuits will continue, optimized through the use of improved designs and methods. New tools and data sources are available for monitoring the risks posed by vegetation, and we will leverage these technologies to better target tree trimming and hazard tree removal efforts. We will also strengthen storm prediction and impact modeling practices to better anticipate, prepare for, and respond to storms. Finally, we will develop and implement advanced physical security and monitoring systems to protect the LIPA grid from natural hazards, unauthorized access and disruption, and other emerging security risks.

Box 1: **Key Transmission & Distribution Strategic Initiatives 2023 - 2027**

Enterprise Asset Management System (EAMS) Implementation – EAMS modernization is a critically important initiative for the utility, supporting nearly all aspects of T&D operations. The new EAMS system will improve the tracking, utilization, and maintenance of all LIPA assets and enhance work management and inventory management practices. The system will also support long-term capital planning. EAMS design will be completed in 2023, with a phased implementation beginning in 2024.

Advanced Distribution Management System (ADMS) Implementation – Upgrading LIPA's Distribution Management System will provide next-generation system situational awareness, visibility and control capabilities, thereby improving system reliability and outage restoration and reducing distribution system losses. Planning will conclude in 2023, with the first phase of implementation beginning in 2024. Sequencing of individual ADMS modules will be carefully orchestrated to ensure functionality dependencies are well managed.

Transmission Control Center Upgrade – This initiative will modernize LIPA's aging Primary and Alternate Transmission Control Centers, expand system capabilities, and improve the resilience of key control center functions. The Control Center will be designed from the ground up to ensure regulatory compliance, accommodate rapid technological change, and mitigate emerging cyber security threats. Planning will extend through 2023, with facility construction to be completed by 2025.

Physical Security and Protection Program – In 2023, LIPA will conduct a Comprehensive Vulnerability Assessment of protection systems and operational security practices covering all threats and to all facilities. Assessment findings will inform the design of a multi-year protection program to deter, detect, deny, delay, and defend LIPA facilities (the 5 D's), with actions tailored for different facility types. The program will enhance the utility's physical security posture by leveraging advanced technologies and strengthening administrative and technical controls.

2 Customer Experience

The LIPA Board has set clear expectations for a customer-first electric utility for Long Island and the Rockaways, with a goal of top quartile performance in J.D. Power's utility residential and business customer satisfaction studies and on industry-standard customer service metrics. PSEG Long Island must make meaningful gains in customer satisfaction to achieve the Board's vision.

Our customers increasingly want flexible and instantaneous access to information and data about their energy, accessible through multiple different channels. They also want payment and support options customized to their individual preferences, as well as the kind of intuitive self-service options they have become accustomed to in other industries. These trends challenge PSEG Long Island to transform a traditional, transaction-focused customer service model to one that cultivates relationships and dynamically responds to varied and changing customer needs.

A much stronger reliance on data and digital technology will be a critical part of this transition. We will combine emerging forms of customer feedback, including customer sentiment data, with operational and financial data to generate insights that enhance customer transactions, operational performance and enable personalized communications, and offerings. We will also expand customer self-service options and ensure that basic customer interactions such as billing and payments are intuitive, convenient, and efficient. The rollout of advanced meters will enable additional customer experience enhancements, including uses of load disaggregation data for customer guidance and new product development.

Modernization of core customer systems will provide the technological infrastructure for many of these enhancements. A new customer information system and contact center platform (Box 2) will deliver multiple capabilities to better serve customers, including better customer data visibility, personalization of customer offerings, and self-service enablement. Through disciplined design and project management, LIPA will ensure that these long-lasting investments in customer service infrastructure deliver real value for customers now and in the future.

In a high-cost electricity market, affordability continues to be a priority for Long Island and Rockaways customers. In 2024, LIPA will become the first major utility in the State of New York to transition residential customers to Time-of-Day (TOD) rates. TOD rates will help customers save money by encouraging them to shift usage to parts of the day when demand is lower, and energy is cheaper to produce. LIPA will also more rigorously manage business costs within customer operations and other functional areas (see finance strategy below) and expand low-to-moderate income program participation and benefits to disadvantaged communities.

Effective customer communications, particularly during emergency and outage situations, will be essential for rebuilding and sustaining customer trust after the experience of Tropical Storm Isaias in August 2020. During outage situations, customers will receive timely and accurate estimated times of restoration so that they can plan their lives. Emergency communications will be proactive, clear, and consistent across channels.

Achieving our vision for the next five years will require new organizational capabilities, encompassing people, processes, and systems. We will strengthen customer operations capacity within LIPA and PSEG Long Island and make sure the organizational structures and staff capabilities are in place to deliver exceptional customer service.

Box 2: **Key Customer Experience Strategic Initiatives 2023 - 2027**

Customer Information System (CIS) Modernization – LIPA's CIS, which manages customer billing and other customer information, was implemented in 1975. Over the years, the system has become more complex and intractable, requiring time-intensive, manual workarounds to meet changing bill formats, customer needs, and regulatory requirements. Over the next four years LIPA will modernize the CIS architecture, enabling multiple capabilities to better serve customers, including improved customer data visibility, better revenue and financial controls, personalization of customer offerings, and the ability to change service features and rates faster and at lower cost. Upgrading a complex, customer facing system like CIS carries significant risk. LIPA will dedicate a high degree of organizational attention and technical expertise to managing the multi-year implementation, with a target to 'go live' with the new CIS platform in 2026.

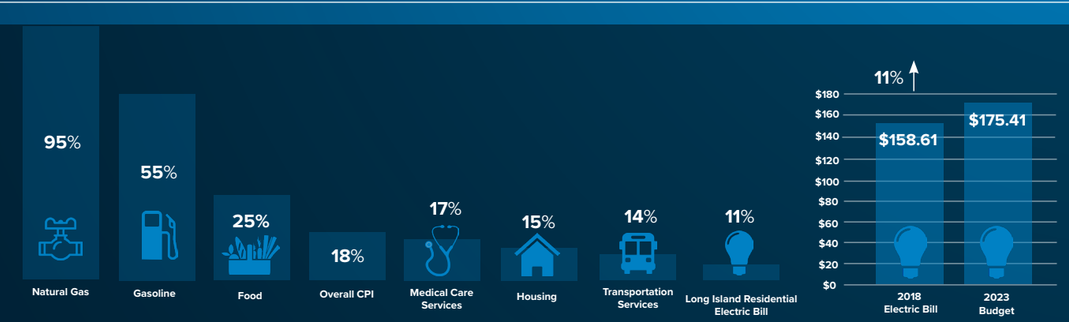
Customer Contact Center Modernization – The Contact Center as a Service (CCaaS) initiative will replace disparate on-premises systems with a fully integrated cloud-based contact center solution. These changes will enhance the customer experience by allowing customers to seamlessly transition between channels and to resolve issues 24/7 through self-service. The initiative will expand call handling capacity, provide a new analytics engine to gauge customer sentiment, and improve containment in the interactive voice response system. The single vendor platform will also reduce overall costs and support faster resolution of operational issues.

Time-of-Day Rate Rollout – LIPA will become the first major utility in the State of New York to transition residential customers to a standard, smart-meter-enabled Time-of-Day rate. TOD rates will allow customers to reduce their energy costs by shifting consumption to cheaper off-peak hours. The new rate design will also facilitate continued integration of distributed energy resources and reduce peak energy demand, thereby reducing both emissions and system investment needs. TOD rates are being developed with extensive stakeholder input and will help customers save money while supporting Long Island's clean energy future. LIPA will launch marketing, outreach, IT, and customer tools in 2023 to educate customers about savings opportunities. Residential customers will be transitioned to TOD rates in 2024, with commercial rate modernization following in 2025.

3 Finance

LIPA aggressively manages costs to minimize the burden on customers, and these efforts have resulted in electric bills that have increased at less than the rate of inflation (Figure 4). In an era of volatile fuel prices, inflationary cost pressures, and significant investments to achieve ambitious carbon reduction goals, LIPA will need to intensify its focus on keeping customers' bills stable and affordable.

Figure 4**: Rise in Costs of Goods and Services Since 2018**



Data provided by the U.S. Bureau of Labor Statistics. For more information, visit www.bls.gov/cpi/.

Over the next five years, LIPA will employ several strategies to ensure the lowest long-term cost to customers and to sustainably manage LIPA's financial assets. Ongoing efforts to decrease financial leverage and cost of capital will continue, with the long-term goal of reducing LIPA's debt-to-assets ratio from 92 percent currently to 70 percent or less by 2030. LIPA's deleveraging efforts have already delivered four credit rating upgrades and saved customers over $600 million in borrowing costs. Further reductions in leverage ratios will support additional cost savings (Box 3).

LIPA will also maximize its use of federal storm hardening and storm restoration grants – made possible by LIPA's public ownership structure — to reduce costs to customers. Use of debt securitization and tax-exempt financing will reduce LIPA's cost of capital, and LIPA will also pursue opportunities to lower long-term real estate costs through direct ownership rather than leasing.

Delivering the lowest long-term cost to customers also means ensuring cost efficiency in operations. LIPA will advance a "value for money" culture by strengthening budgets, financial plans, and financial reporting to support aggressive cost management, drive sound business decisions, and maximize customer value. An important initiative will be the establishment of a Business Process Optimization practice within LIPA (Box 3). This team will systematically identify business process improvements and cost saving opportunities so the realized savings can be built into steady-state operating budgets.

We will also strengthen operational and financial reporting and monitoring tools and processes for capital project review and approval, while ensuring that LIPA and PSEG Long Island have the requisite financial analysis and fiscal management capabilities to serve as effective stewards of customer resources. Key financial management functions such as treasury and insurance management will be strengthened and modernized, and we will utilize new sources of data to improve financial forecasting and cost recovery mechanisms.

Box 3: **Key Finance Strategic Initiatives 2023 - 2027**

Financial Deleveraging – In 2013, LIPA had the lowest credit ratings and highest leverage of any large public power utility, largely stemming from the legacy of the Shoreham plant. In 2015, LIPA adopted a plan to reduce leverage over time and has since obtained four credit rating upgrades and saved customers over $600 million. LIPA's deleveraging efforts will continue with the long-term target of a 70 percent debt-to-assets ratio by 2030, down from 230 percent at the time of the LIPA/Long Island Lighting Company (LILCO) merger in 1998. LIPA is also looking forward to a potential fifth credit rating upgrade in 2024 or 2025.

Business Process Optimization – Process optimization is a continuous effort to drive cost reduction while maximizing business value. LIPA will establish and staff a Business Process Optimization (BPO) unit to lead this process and deliver a systematic approach. The BPO unit will conduct targeted business process reviews, identify and prioritize savings opportunities in collaboration with operational teams, and track progress on cost reduction and process improvement initiatives over time.

Budget System Modernization – Upgrading LIPA's budgeting system will be a priority for the finance department in 2023. The new system will streamline existing processes, provide better data and information for budgetary decision making, and introduce new functionalities, including scenario development, automated reporting, and near real-time visibility into cost variances.

4 Information Technology

Many of the major business priorities described in the plan – improving asset management, facilitating DER integration, advancing smart grid maturity, and enhancing customer contact and customer information management, for example – rely heavily on intelligent and timely deployment of information and operational technology. In order to deliver the envisioned benefits to LIPA's customers, the planning and implementation of these initiatives need to be anchored in clearly defined business requirements. Functional experts in LIPA and PSEG Long Island will define the driving principles and requirements, and the IT function, working in collaboration with functional teams, will translate those requirements into systems capabilities and manage systems implementation. Thus, this plan is rooted in and guided by LIPA's critical business needs, with intelligent IT as a primary enabler for meeting these needs.

LIPA and PSEG Long Island will take several steps to ensure that the IT organization is equipped to deliver the requisite systems functionality on time and on budget. A dedicated IT management team for Long Island operations will be established, and industry standard organizational maturity assessments will help identify and prioritize opportunities to strengthen business processes. A revitalized IT governance structure will guide IT delivery across multiple enterprise goals, and a dedicated Project Management Office for Long Island will lead day-to-day implementation of large IT projects.

Building on the difficult lessons learned during Tropical Storm Isaias, PSEG Long Island will also take additional steps to make technology platforms more robust and operationally stable. Business continuity and disaster response plans will be developed for all critical systems and processes, and LIPA will independently verify emergency restoration plans and IT systems testing. Furthermore, all IT and OT assets will be kept current and under general support from the product vendor.

Several IT and OT systems serving Long Island operations are currently intermingled with PSEG's corporate systems. Under the terms of LIPA's April 2022 revised contract with PSEG Long Island, these systems and associated support organizations will be fully segregated and independently operable for Long Island by the end of 2024 (Box 4). This provides both long-term flexibility in LIPA's vendor relationships as well the ability for Long Island operations to adopt business processes and priorities separate from those of the rest of the PSEG enterprise based on our own needs, resources, and timelines.

Consistent with LIPA Board policy, we will also proactively protect IT systems and customer, employee, and third-party data from unauthorized access or disruption. A dedicated cyber security organization for Long Island will develop and manage a cyber security program and conduct regular vulnerability assessments and penetration testing of all information and operational technology systems. We will also clearly communicate how customer information is collected, used, and disclosed, and ensure that third-party users of customer information have robust information security practices.

As a field, information technology continues to evolve and push the possibility frontier, introducing new, value-added use cases for the utility industry. LIPA and PSEG Long Island will stay abreast of these changes and develop long-term technology strategies that anticipate future business needs and ensure systems coherence.

Box 4: **Key Information Technology Strategic Initiatives 2023 - 2027**

IT Systems Separation – In the April 2022 contract between LIPA and PSEG Long Island, the parties agreed that it would be beneficial for all IT systems serving LIPA to be separate and distinct from the systems, data, reports, and information of PSEG Long Island and its affiliates. Maintaining separate systems will focus the development and management of IT systems on LIPA's specific customer and business needs and will strengthen accountability for Long Island systems performance. System separation also has the potential to reduce long-term costs borne by customers and increase flexibility should LIPA transition the provision of management services in the future. The scope of the separation effort includes the Enterprise Resource Planning (ERP) system, infrastructure, various application systems, and cyber-security support systems. As recommended by the New York Department of Public Service and adopted by the LIPA Board, IT systems separation will be completed by year-end 2024.

IT Organizational Maturity – Tropical Storm Isaias in August 2020 exposed critical deficiencies in PSEG Long Island's management of information technology systems. The new PSEG Long Island IT management put in place under the reformed contract has a strong commitment to building the capability of the IT organization by applying industry best practices and processes and evaluating organizational maturity against industry standard benchmarks.

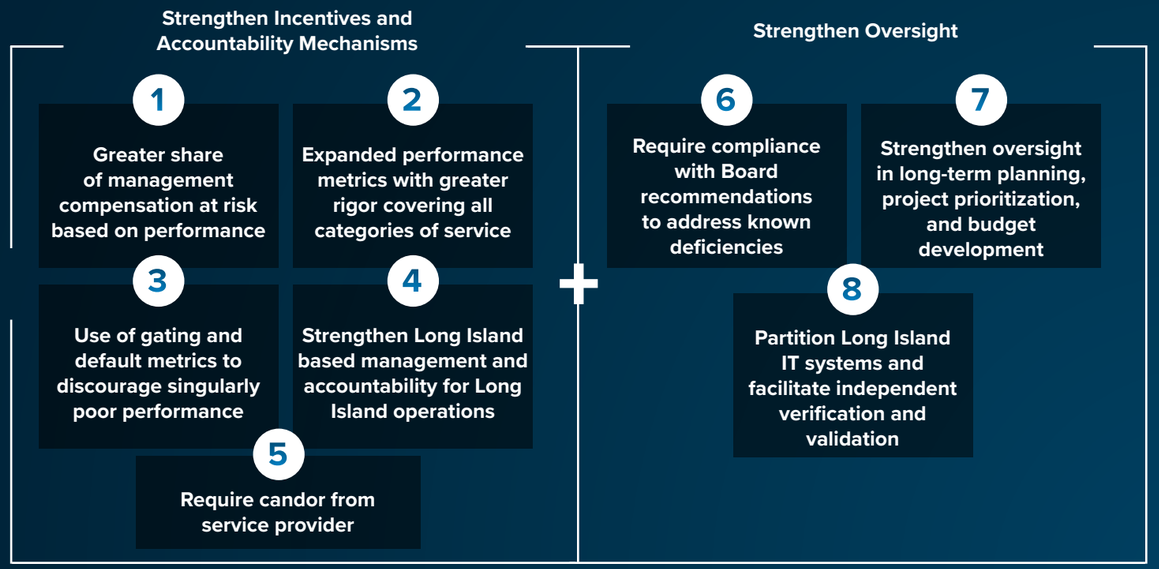
Long-term IT Systems Planning– Over the next three years, LIPA and PSEG Long Island will develop long-term technology plans that anticipate future business needs and ensure that LIPA's investments in IT modernization are pursued strategically and coherently. Separate planning initiatives will address the organization's data center and cloud strategy, an enterprise-wide data warehousing and analytics strategy, and a comprehensive enterprise mobility strategy to increase the efficiency and productivity of field staff. A long-term systems replacement and technology modernization strategy will address core technology vendor partners and long-term IT architecture and systems integration issues.

5 Performance Management

'Performance management' refers to management and oversight processes that support the achievement of business objectives. Because LIPA contracts with PSEG Long Island for most of the management services used to operate the electric grid, vendor performance management mechanisms are particularly important in delivering on the LIPA Board's vision for customers.

In April 2022, LIPA and PSEG Long Island began operating under a new, reformed contract. The contract reforms (see Figure 5) introduced new mechanisms to strengthen LIPA and DPS oversight, including expansion of compensation-linked performance metrics, LIPA's independent validation and verification (IV&V) of critical IT systems, and LIPA's input to PSEG Long Island's manager performance evaluation processes. To ensure that the contractually required mechanisms deliver the envisioned impact on performance, LIPA will equip its staff to lead these processes through provision of guiding frameworks, training, and tools.

Figure 5: **Key Elements of the New Contract with PSEG Long Island**



LIPA will also work to create and sustain a utility-wide performance management culture. In practice, this will entail clear performance expectations and standards for PSEG Long Island – quality standards for key deliverables and performance standards for project management, for example – and further strengthening of LIPA's vendor management capabilities. LIPA will also play a more active role in scanning for and selectively integrating best practices of industry-leading utilities.

LIPA's current contract with PSEG Long Island is due to expire at the end of 2025. Over the next year, LIPA will synthesize lessons learned on performance management in order to ensure that the next operating services agreement reflects LIPA's accumulated knowledge and experience with its distinctive contracted management model.

FINANCIAL RESOURCE REQUIREMENTS

Figure 6 provides capital expenditure estimates (in 2023 dollars) for major strategic initiatives, defined as initiatives expected to exceed $5 million in capital investment over the 2023 to 2027 planning period. These high-level estimates are preliminary and intended only as guidance to inform cost and value tradeoffs and resource prioritization. Many of the initiatives are still in the early planning stages; resource estimates will continue to be updated as the project scope is further defined. In some areas, formal assessments will be conducted over the next two years. Depending on the findings of these studies, additional major capital initiatives could be pursued. The estimates in Figure 6 do not represent a full costing, as operating cost impacts are not included.

LIPA's budgeting processes will identify full operating and capital cost implications – including cost savings from operating efficiency gains – at the level of individual initiatives, which will be submitted to the LIPA Board for review and approval.

Figure 6: **Estimated Capital Expenditures for Major Strategic Initiatives**

TRANSMISSION & DISTRIBUTION

** In millions of 2023 dollars*

Major Strategic Initiatives	2023	2024	2025	2026	2027	2023-2027 Total
Storm Hardening Program	83.0	75.0	75.0	75.0	75.0	**$383.0**
Distribution Circuit Improvement Program (CIP)	15.3	16.8	17.6	18.5	19.4	**$87.8**
Distribution Multiple Customer Outages (MCO)	8.3	8.1	8.5	8.9	9.4	**$43.2**
Transmission Control Center Replacement	9.3	37.7	45.3	1.4	10.1	**$103.7**
Enterprise Asset Management System (EAMS)	8.3	18.0	20.0	7.0	3.0	**$56.3**
Physical Security & Protection Program	7.9	6.8	5.5	5.5	0.5	**$26.2**
Advanced Distribution Management Sytems (ADMS)	2.6	4.3	4.0	5.0	6.0	**$21.8**
Distributed Energy Resource Management Systems (DERMS)	2.9	3.2	5.2	5.0	-	**$16.2**
Vegetation Management System	-	1.0	4.0	1.0	1.0	**$7.0**
T&D TOTAL	**$137.5**	**$170.9**	**$185.1**	**$124.5**	**$124.5**	**$745.3**

CUSTOMER EXPERIENCE

Major Strategic Initiatives	2023	2024	2025	2026	2027	2023-2027 Total
Customer Information System Modernization (CIS)	2.0	5.0	25.0	40.0	10.0	**$82.0**
Time-of-Day Rate Rollout	4.8	0.8	0.5	-	-	**$6.1**
Customer Contact Center Modernization	5.9	-	-	-	-	**$5.9**
CUSTOMER EXPERIENCE TOTAL	**$12.7**	**$5.8**	**$25.5**	**$40.0**	**$10.0**	**$94.0**

FINANCE

Major Strategic Initiatives	2023	2024	2025	2026	2027	2023-2027 Total
Enterprise Resource Planning System Replacement (ERP)	-	-	2.0	10.0	20.0	**$32.0**
Budget & Treasury Systems Modernization	2.0	1.0	1.0	1.0	-	**$5.0**
FINANCE TOTAL	**$2.0**	**$1.0**	**$3.0**	**$11.0**	**$20.0**	**$37.0**

INFORMATION TECHNOLOGY

Major Strategic Initiatives	2023	2024	2025	2026	2027	2023-2027 Total
Cybersecurity Systems Enhancements	14.2	7.9	6.4	5.7	0.7	**$34.8**
IT Systems Separation	12.0	8.0	1.2	-	-	**$21.2**
Standard Data Platform & Analytics	3.8	3.8	3.8	1.0	1.8	**$14.2**
Enterprise Document Management System	3.2	8.0	2.0	-	-	**$13.2**
Geographic Information System	-	3.0	2.0	1.0	1.0	**$7.0**
Construction Portfolio Management System	2.2	1.0	1.0	0.5	0.5	**$5.2**
CUSTOMER EXPERIENCE TOTAL	**$35.4**	**$31.7**	**$16.4**	**$8.2**	**$4.0**	**$95.6**

Total Capital Expenditures for Major Strategic Initiatives	$187.6	$209.3	$230.0	$186.5	$158.5	$971.8

RISKS AND MITIGATION

In order to meet the objectives articulated in this plan, LIPA and PSEG Long Island will need to proactively manage and mitigate several potential risks. The sections below describe key categories of risk to successful implementation as well as mitigating factors and strategies that LIPA and PSEG Long Island will employ.

ORGANIZATIONAL CAPACITY

Access to professional skills and expertise is essential to deliver planned initiatives over the next five years. LIPA and PSEG Long Island will need to equip staff with the necessary training and tools and selectively recruit skilled staff and external expertise to fill identified capability gaps. There will be a particular focus on strengthening capabilities in the following areas which are foundational to multiple plan priorities:

- **Project and Vendor Management Capabilities** – Planned initiatives include several large and complex IT projects that carry technical design and systems integration risks, as well as risks that vendor-led implementation is not on time, on budget, and of sufficient quality. Failure to manage these risks would introduce reputational risks for the utility. LIPA will mitigate these risks through stronger IT governance and project management capacity. A Joint LIPA-PSEG Long Island System Planning Advisory Committee will provide oversight and guidance of large systems initiatives and a dedicated project management office for Long Island operations will oversee day-to-day implementation. LIPA and PSEG Long Island will also invest in advancing IT business processes and organizational maturity guided by industry standard assessment models.

- **Subject-Matter Expertise** – Project management capabilities need to be married with technical and subject-matter expertise to effectively define business requirements and design key systems functionality. In addition to accessing industry-leading expertise externally, PSEG Long Island will need to coherently integrate relevant internal expertise from various functional domains on systems initiatives that impact multiple organizational priorities. LIPA will also need sufficient subject matter expertise and technical proficiency to manage vendor performance given its expanded role under the new contract.

- **Data Analytics Capacity** – A much stronger reliance on data for business decision making is core to several initiatives across customer operations, T&D operations, and finance. Building the IT infrastructure for data access is only one piece of the puzzle. LIPA and PSEG Long Island need to also build staff capabilities for data analysis and embed new information sources into management and oversight processes. An enterprise-wide data warehousing and analytics strategy – to be developed in 2023 – will map business data sources and prioritize use cases, identify required tools and functionality, and assess data analytics skills gaps to support a truly data-driven utility.

ORGANIZATIONAL ALIGNMENT

For LIPA's contracted management business model, it is critically important to ensure top-to-bottom alignment between LIPA Board objectives, organizational strategy, and PSEG Long Island's day-to-day operations. A 'one utility' culture and cooperative mindset between LIPA and PSEG Long Island will be vital to achieving such alignment. LIPA and PSEG Long Island will need to collaboratively build and sustain senior management commitment and ownership of the strategic plan. Planned initiatives to strengthen financial and operating reporting frameworks and to integrate them into management and oversight processes will play an important role in sustaining alignment and management attention.

Aligning incentives under the reformed contract structure will also be important. LIPA and DPS will need to ensure that annual metrics direct management attention to priority strategic objectives and offer compelling incentives for performance, with independent validation and verification as an assurance mechanism.

As the utility undertakes several large, multiyear initiatives, attention to change management will be necessary to ensure that significant investments in systems and technology are met with the organizational readiness to deliver the envisioned business benefits. This readiness includes staff-level understanding of current gaps and necessary shifts as well as the adaptation of business processes, tools, and training to create an enabling environment for effective implementation.

TECHNOLOGICAL CHANGE

Major information and operational technology initiatives – a key strategic thrust of this plan – represent significant upfront investments with benefits that are spread over long periods of time. Given the rapid pace of technological change, LIPA must take care to avoid long-term investments in platforms that quickly become obsolete. Systems design efforts should prioritize future flexibility to the extent possible, and long-term IT planning should not only anticipate changing future business needs but also gauge ongoing evolution and advancement of technological solutions.

MANAGEMENT CONTINUITY

LIPA's current contract with PSEG Long Island is due to expire on December 31, 2025, just over the midway point of this plan's time horizon (2023-2027). Furthermore, the 2022 New York State Budget enacted a Legislative Commission on the Future of LIPA to investigate and report to the State Legislature on a pathway to establish a public power model for the management and operations of LIPA. The Commission is expected to issue a final report by April 2023, following review and recommendations from the New York State Comptroller. If the Governor and State Legislature decide not to pursue a public power management model, LIPA's management contract will be re-bid starting in 2023 to allow sufficient time to review and select vendors and to potentially transition services to a new provider.

The potential risks associated with a possible reassignment of operations management – either to LIPA management or to a new vendor – are being proactively mitigated. IT systems migration is the most complex and longest lead time management transition task. As discussed above, LIPA's reformed contract with PSEG Long Island requires all IT systems to be fully migrated to Long Island ServCo management within the term of the current contract. LIPA and PSEG Long Island have agreed to an IT System Separation Plan – recommended by DPS and approved by the LIPA Board – and activities under this plan have already begun and are to be fully completed by the end of 2024, a year before contract termination. The strategic plan also includes pathways for the potential transition of other non-IT functions.

APPENDIX: 5-YEAR FUNCTIONAL ROADMAPS

The following 5-year roadmaps map out the sequence of activities required between 2023 and 2027 to achieve defined strategic objectives within each of T&D, Customer Experience, IT, Finance, and Performance Management. These functional roadmaps were developed through close collaboration between LIPA and PSEG Long Island management and will be revisited annually to ensure that planned initiatives continually reflect the current business environment and emerging opportunities and industry best practices.

TRANSMISSION & DISTRIBUTION

GOAL HIGHLIGHTS

1

Adopt a programmatic approach to asset management based on industry best practices

a) Implement a new asset management program that is consistent with ISO-55001 standards and improves management of assets, data, and work practices
b) Plan and implement an end-to-end Enterprise Asset Management System (EAMS) to improve operational and workforce efficiency, customer satisfaction, and overall system performance

2

Apply modern system design and innovative technology to improve overall system performance

a) Plan and implement an Advanced Distribution Management System (ADMS) to enhance real-time system visibility and situational awareness
b) Improve circuit conditions that cause repeated customer outages through advanced protection and control systems and devices
c) Leverage data, including smart meter, distribution system, and advanced sensor data, to improve operational efficiency, system reliability, and safety
d) Modernize LIPA's transmission control center to improve real-time situational awareness and control of the transmission system
e) Transition LIPA's fleet to electric vehicles

3

Facilitate the interconnection of renewable and distributed resources while ensuring reliable T&D system performance

a) Establish clear and scalable customer programs and interconnection rules to inform prospective DER customers
b) Deploy a modern Distributed Energy Resource Management System to provide greater visibility into all DERs on the LIPA grid
c) Strengthen DER forecasting and planning tools to optimize system hosting capacity

4

Reduce the number and duration of outages caused by storms and other emergencies

a) Optimize implementation of overhead and underground storm hardening through use of improved designs and methods
b) Utilize vegetation intelligence to enhance the effectiveness of vegetation management and storm hardening programs
c) Strengthen predictive storm impact modeling to better anticipate, prepare for, and respond to storms

5

Protect the LIPA grid from natural hazards and unauthorized access and disruption

a) Develop and implement advanced physical security and monitoring systems to mitigate current and emerging security risks

1 Adopt a programmatic approach to asset management based on industry best practices

OBJECTIVES	2023	2024	2025	2026	2027
1a. Implement a new Asset Management (AM) program that is consistent with ISO-55001 standards and improves management of assets, data, and work practices	• Develop and implement a Strategic Asset Management Plan (SAMP) and 22 asset class specific Asset Management Plans (AMPs) • Develop/refine AM performance management processes • AM organizational alignment • AM governance and change management plans and processes • Outside plant physical asset inventory and inspections • Capital investment planning and asset risk management processes	• Optimize maintenance and inventory processes			
1b. Plan and implement an end-to-end Enterprise Asset Management System (EAMS) to improve operational and workforce efficiency, customer satisfaction, and overall system performance	• EAMS Phase I Implementation • Define core EAMS business requirements	• EAMS Phase II Implementation • Define business requirements for EAMS Phase III – Capital Investment Planning and Risk Analysis	• EAMS Phase III Implementation		

2 Apply modern system design and innovative technology to improve overall system performance

2a. Plan and implement an Advanced Distribution Management System (ADMS) to enhance real-time system visibility and situational awareness	• ADMS Phase I planning	• ADMS Phase I implementation • OMS to DMS integration decision • Assess need for meter and gateway router upgrades based on plan for DER programs	• ADMS Phase I completion (*timing dependent on automatic sectionalizing deployment*) » Volt/Var » FLISR capabilities • Define ADMS Phase II business requirements • Assess need for additional field devices to support ADMS • OMS re-platforming decision	• ADMS Phase II implementation • Deploy additional ADMS field devices if required	• ADMS Phase II completion » Enable new switch management, system visibility, and distribution state estimation capabilities

OBJECTIVES	2023	2024	2025	2026	2027
2b. Improve circuit conditions that cause repeated customer outages through advanced protection and control systems and devices	• Develop an overarching T&D architecture and system protection vision and operating philosophy to inform system design • Upgrade remaining 4kV lines → • Deploy and configure reclosers and smart fuses for automatic sectionalizing →				
2c. Leverage data including smart meter, distribution system, and advanced sensor data, to improve operational efficiency, system reliability,	• Define T&D data needs and use cases as part of enterprise-wide Data Warehousing and Analytics Strategy (*see IT roadmap*)	• Implement T&D data analytics enhancements (e.g. ETR accuracy, storm hardening performance, storm restoration optimization) →			
2d. Modernize LIPA's transmission control center to improve real-time situational awareness and control of the transmission system	• Complete selection of technology, physical design, and permitting process for the transmission control center • Evaluate future need for Dynamic Line Ratings as part of coordinated policy and planning processes	• Begin construction of transmission control center	• Complete construction and relocate existing PTCC to new facility		
2e. Transition LIPA's fleet to electric vehicles	• Continued electrification of light-duty vehicles →		• Develop and implement a long-term strategy for full fleet electrification, including analysis of technology maturity, and charging infrastructure and facilities implications →		

3 Facilitate the interconnection of renewable and distributed resources while ensuring reliable T&D system performance

3a. Establish clear and scalable customer programs and interconnection rules to inform prospective DER customers	• DER needs and market assessment • DER program planning and business model design	• DER program measurement and assessment → • Automate processes for intake of new interconnection requests →	• Assess alternative models for DER market integration	• DER program implementation →	
3b. Deploy a modern Distributed Energy Resource Management System (DERMS) to provide greater visibility into all DERs on the LIPA grid	• Complete DERMS Phase I: SCADA DER Visibility • Determine potential need and scope for DERMS Phase II based on DER program design →	• DERMS Phase II Implementation → • (if necessary) • Assess Distribution Control Centers for DER readiness →	• Upgrade Distribution Control Center as needed		

OBJECTIVES	2023	2024	2025	2026	2027
3c. Strengthen DER forecasting and planning tools to optimize system hosting capacity	• Develop EV Hosting Capacity and Energy Storage Maps to provide information to customers and developers on favorable locations • Update locational values analysis for constrained areas →	• Assess distribution planning capabilities and tools needed to support growth in DER and develop an implementation plan →	• Implement distribution planning upgrades as needed →	→	→

4 Reduce the number and duration of outages caused by storms and other emergencies

4a. Optimize implementation of overhead and underground storm hardening through use of improved designs and methods	• Develop plans to harden supply to seven transmission load pockets and begin implementation • Submit updated scope of work for FEMA storm hardening grant • Develop planning and crew training for selective use of spacer cable to address key portions of the worst performing circuits • Develop a program to selectively underground hard to access rear-lot service (based on 2022 pilots) • Participate in EPRI's Climate READi initiative to model and evaluate climate risks and resiliency plans using industry best practices →	• Implement FEMA storm hardening grant → • Begin deployment of spacer cable → • Submit a multi-year storm resiliency plan to the LIPA Board for review	→	→	→
4b. Utilize vegetation intelligence to enhance the effectiveness of vegetation management and storm hardening programs	• Implement "Trim to Sky" protocol to the first protective device →	*complete 75% of circuits*	*complete 100% of circuits*	→	→
	» *complete 50% of circuits* • Define business requirements for a vegetation management system → • Identify cost effective monitoring technologies (e.g. satellites, drones) and data sources (e.g. density, species, growth rates) to better target tree trimming and hazard tree removal efforts	• Select a vegetation management system vendor and issue an RFP →	• Vegetation management system implementation →	→	→
4c. Strengthen predictive storm impact modeling to better anticipate, prepare for, and respond to storms	• Map recent storm hardening and vegetation management initiatives • Conduct a needs assessment of weather and storm impact data and modeling software solutions	• Implement a new digital storm modeling tool • Design and develop the emergency response organization (skills and structure) to best leverage enhanced impact modeling and EAMS tools	→	→	→

5 Protect the LIPA grid from natural hazards and unauthorized access and disruption

OBJECTIVES	2023	2024	2025	2026	2027
5a. Develop and implement advanced physical security and monitoring systems to mitigate current and emerging security risks	• Conduct a physical security vulnerability assessment • Develop a comprehensive physical protection program tailored to distinct types of facilities and begin implementation • Explore the potential to combine organizational roles and responsibilities for physical security and cyber security	→	→		

CUSTOMER EXPERIENCE

GOAL HIGHLIGHTS

1 **Enhance customer transaction performance through analysis of customer and operational data**

a) Expand customer feedback and sentiment data collection using emerging technology
b) Utilize customer experience and operational data to formulate operational improvements

2 **Optimize customer channel experience and improve self-service utilization**

a) Ensure that core customer interactions are intuitive and efficient
b) Increase and optimize customer self-service utilization

3 **Modernize core customer systems to enhance operational effectiveness and deliver on customer needs**

a) Implement a new customer information system (CIS) to transform the customer experience
b) Enable cutting edge technologies and analytics for the Call Center Solution to facilitate continuous improvement
c) Build out cost effective customer experience opportunities inherent in the AMI system implementation

4 **Improve energy affordability through rate design and targeted programs**

a) Rollout time-of-day rates that encourage customers to shift usage to lower cost and cleaner times of day
b) Integrate customer experience considerations into rate and tariff decision making
c) Expand low-to-moderate income program participation and benefits to disadvantaged communities

5 **Provide proactive and personalized communications and customized offerings to customers**

a) Ensure timely and accurate communication to customers about outages and restoration times
b) Strengthen capabilities for data-driven segmentation to enable customized communications and offerings

6 **Strengthen customer operations capacity within LIPA and PSEG Long Island**

a) Ensure the organizational structure and staff capabilities to deliver exceptional service

1 Enhance customer transaction performance through analysis of customer and operational data

OBJECTIVES	2023	2024	2025	2026	2027
1a. Expand customer feedback and sentiment data collection using emerging technologies	• Develop an overall customer survey strategy to optimize response and ensure quality insights for completed and failed transactions • Expand transactional surveying to additional channels • Measure customer satisfaction after customer-facing technology implementations against pre-implementation targets and identify opportunities for improvement	• Create a process for interaction sentiment analysis • Measure first contact resolution across channels • Track and log customer journey across and within channels for Time-of-Day opt out pilot →	• Expand additional non CCaaS digital customer survey to include in-channel, real-time surveying • Enhance customer journey tracking and logging capability across and within channels • Assess survey feedback versus sentiment analysis to reassess survey gaps and opportunities that may be filled by sentiment		
1b. Utilize customer experience and operational data to formulate operational improvements	• Analyze ease, satisfaction, and cost of transactions and prioritize refinements → • Enrich customer survey results with additional data to deepen customer insights → » *Outage and payment*	» *Moves and billing* • Formulate flow improvements based on journey tracking → » *TOD Opt*	» *Collection & new business* » *2 additional processes across all channels*	» *2 additional processes across all channels*	

2 Optimize customer channel experience and improve self-service utilization

2a. Ensure core customer interactions are intuitive and efficient	• Implement identified improvements from outage assessment → • Create consistent standards and guidelines for deferred payment options • Migrate credit card operations to a new vendor to enhance customer experience and reduce credit card fees for commercial customers • Assess collections processes and develop guidelines for reps • Enhance data reporting and tracking for estimates and cancel rebill processes	• Conduct a feasibility study for real-time payment posting and implement (*if feasible with legacy systems*) • Conduct full assessment of billing processes • Allow customers to select their preferred payment due date • Establish a new OSA metric to measure timely billing based on an actual read and define targets • Default new MyAccount profiles to e-bill • Establish a concierge service for transactions requiring a higher level of care	• Implement identified improvements from billing process assessment • Break down authentication barriers without compromising security	• Implement real-time payment posting (*if a new CIS is required for implementation*) • Implement identified improvements from Collection and new business process assessment	• Improve CSR visibility of customer interactions and contact history • Establish a full-featured customer preference center for interactions

OBJECTIVES	2023	2024	2025	2026	2027
2b. Increase and optimize customer self-service utilization	• Implement chat and chatbot • Replace Salesforce solution for email and close ineffective email channels • Automate customer move out and transfer processes • Install four kiosks for 24/7/365 customer payment and transaction access • Assess customer office location needs and alternative forms for community presence and customer engagement and begin implementation of identified solutions	• Build 2 smart webforms with validation for requiring documentation • Automate customer move in process • Expand kiosks based on 2023 findings and enhance capability of kiosks to perform a standard payment agreement	• Offer visual IVR for more complex transactions	• Enhanced integration of channel information with new CIS	

3 Modernize core customer systems to enhance operational effectiveness and deliver on customer needs.

OBJECTIVES	2023	2024	2025	2026	2027
3a. Implement a new customer information system (CIS) to transform the customer experience	• Define CIS business and technical requirements • Conduct CIS organizational readiness and data quality assessments	• Address CIS organizational gaps (staffing, structure, skills) • Identify preferred CIS platform and issue RFP • Issue RFP and select vendor for development and integration	• Sequence implementation of key interfacing systems (e.g., work management, EAMS) • Begin design and build of new CIS system	• Develop and test integration with new CIS system • Go Live with new CIS System	
3b. Modernize customer contact systems (CCaaS) to facilitate self-service	• Develop a 2-year roadmap for future CCaaS enhancements • Go live with full CCaaS functionality (Webchat, Voice Enrollment & Verification, Quality Mgmt, Interaction Analytics, Workforce Mgmt) • Operationalize certain voice analytics tools (e.g., same-day escalation remediation) • Legacy system retirement	• Implement CCaaS enhancements » *Advanced analytics and reporting products*	» *Automation of rep Quality Assurance process*	• Utilize CCaaS analytics platform to detect potential CIS defects • Implement Omni-Channel capabilities to have a fluid switch between channels • Ensure effective integration into the new CIS system	
3c. Build out cost effective customer experience opportunities inherent in the AMI system implementation	• Define customer-facing AMI data requirements as part of enterprise-wide Data Warehousing and Analytics Strategy (*see IT roadmap*) • Enhance the reporting and validation of meter reads • Conduct RFP to consolidate AMI data vendors • Evaluate the Next Generation Insights pilot and determine potential next steps for scaling	• Implement customer AMI data functionality enhancements • Provide expanded availability of load disaggregation data to inform customer guidance on energy consumption habits • Develop a single user interface for customer access to AMI data	• Consider implementing a C&I Demand Alert Pilot to help commercial customers manage demand charges		

4 Improve energy affordability through rate design and targeted programs

OBJECTIVES	2023	2024	2025	2026	2027
4a. Rollout time-of-day (TOD) rates that encourage customers to shift usage to lower cost and cleaner times of day	• Conduct a multi-channel information and marketing campaign • Design and implement customer decision support tools	• Establish TOD as the default rate for residential customers • Migrate 850,000+ customers (85%+ of residential customers) with bill protection guarantees and ability to opt out	• Modernize commercial rates • Complete phase out of bill protection		
4b. Integrate customer experience considerations into rate and tariff decision making	• Conduct a full review of all rates and tariffs, including inter-class break points, focused on rate simplification, customer friendliness, and plain language • Create a cross-functional rate implementation team (finance, rates, billing, IT, customer experience)	→ • Implement improvements identified by the review			
4c. Expand low-to-moderate income (LMI) program participation and benefits to disadvantaged communities	• Utilize data-driven targeting and expand marketing and outreach to grow enrollment in income qualified programs • Develop a single customer entry/ qualification process for all LMI offerings • Finalize reporting framework for benefits to disadvantaged communities with NYSERDA	• Assess performance of LMI programs against policy goals • Assess effectiveness of consumer advocates in facilitating customer access to LIPA, state, and federal programs • Review reduced payment agreement qualification process and implement opportunities to improve user friendliness			

5 Provide proactive and personalized communications and customized offerings to customers

5a. Assure timely and accurate communication with customers about outages and restoration times	• Develop and implement the Strategic Technology Plan for the Outage Reporting and Communications • Resolve service restoration communication gaps	→ • Improve awareness for customers that had perfect power • Offer outage tracker updates via text and push notifications	→ • Consistently provide the customer the reason for outage		

OBJECTIVES	2023	2024	2025	2026	2027
5b. Strengthen capabilities for data-driven segmentation to enable customized communications and offerings	• Implement Customer Intelligence Pilot program • Improve the Home Comfort program contractor network through data-driven marketing, decision support tools, contractor vetting, and performance incentives	• Full implementation of segmentation tools building on lessons of pilot	• Develop a plan to integrate segmentation tools and customer preferences within the new CIS platform	• Explore additional use cases of customer segmentation tools • Go live with full integration of segmentation tools within CIS platform	

6 Strengthen customer operations capacity within LIPA and PSEG Long Island

6a. Ensure the organizational structure and staff capabilities to deliver exceptional service	• Conduct a Customer Operations organizational assessment to determine organizational alignment, appropriate headcount levels, optimal reporting and support ratios, and required capabilities and skillsets. • Fill vacant LIPA Customer positions	→ • Implement changes identified in the organizational assessment • Define required data analysis capabilities and integrate into hiring decisions and staff training • Assess staffing requirements for concierge service			

FINANCE

GOAL HIGHLIGHTS

1 **Decrease LIPA's leverage and cost of capital**

a) Achieve AA-category credit ratings by reducing LIPA's debt-to-assets ratio from 92% to 70% or less by 2030
b) Maximize grants and low-cost funding sources
c) Minimize costs through securitization of debt and tax-exempt financing

2 **Advance a "value for money" culture by strengthening budgets, financial plans, and financial reporting that maximize customer value, support aggressive cost management, and drive sound business decisions**

a) Establish and staff a Business Cost Optimization practice within LIPA
b) Assure LIPA and PSEG Long Island have the required financial analysis and fiscal management capacities
c) Strengthen processes for Capital Project review and approval
d) Establish an integrated operational and financial performance monitoring framework and incorporate it into regular management and reporting processes

3 **Enhance LIPA's financial operations**

a) Implement new Treasury management system to enhance operational efficiencies and cash forecasting
b) Optimize insurance management
c) Improve capabilities to assess and forecast revenues, sales, cash flow, and the impact to cost recovery mechanisms using AMI information

1 Decrease LIPA's leverage and cost of capital

OBJECTIVES	2023	2024	2025	2026	2027
1a. Achieve AA-category credit ratings by reducing LIPA's debt-to-assets ratio from 92% to 70% or less by 2030.	• Implement LIPA's springing lien bond indenture to update bond covenants	• Simplify bank borrowings using new bond indenture	• Achieve 82% debt-to-asset ratio or lower	• Consider a bond covenant for rate stabilization fund balances	• Achieve 75% debt-to-assets ratio or lower • Achieve at least A1/A+ credit ratings
1b. Maximize grants and low-cost funding sources.	• Secure $300+ M new FEMA grant for storm hardening • Obtain FEMA reimbursements for Sandy and Isaias	• Begin storm hardening construction under new grant			• Complete storm hardening and obtain grant reimbursement
1c. Minimize costs through securitization of debt and tax-exempt financing.	• Close an electricity pre-pay for savings • Refinance debt through securitization for savings	• Refinance debt through securitization for savings • Reduce cost in real estate through direct ownership (in lieu of leasing)	• Complete $3.5 billion authorized debt securitization program		
1d. Reduce costs in real estate	• Purchase a property for a new operations yard to replace a yard currently under lease • Assess and execute on property ownership opportunities at Riverhead National Grid property	• Consider additional opportunities for ownership of National Grid lease properties based on Riverhead experience →			

2 Advance a “value for money” culture by strengthening budgets, financial plans, and financial reporting that maximize customer value, support aggressive cost management, and drive sound business decisions

OBJECTIVES	2023	2024	2025	2026	2027
2a. Establish and staff a Business Process Optimization practice within LIPA	• Establish and define the roles and responsibilities for the BPO team • Complete up to 3 business process reviews (including implementation of prior studies on fleet, overtime, workforce management, vegetation management) • Track savings and process improvements from recommendations and business process reviews	• Review effectiveness of BPO and capacities and capabilities • Build savings from BPO initiatives into budgets			
2b. Assure LIPA and PSEG Long Island have the required financial analysis and fiscal management	• Complete consultant study of current capacities and potential realignment of budget department roles and responsibilities at LIPA and PSEG Long Island • Establish an implementation plan to address study findings	• Review the effectiveness of the budget department compared to KPIs			
2c. Strengthen processes for Capital Project review and approval	• Implement a cross-functional (finance, T&D, IT) review of PSEG’s capital project review and approval process, including PSEG’s controls, project scoping, risk assessment and prioritization, estimation, and budget review and approval • Translate findings of cross-functional review into system requirements • Review Capital Project Impact Analysis process for effectiveness	• Implement a capital project and capital budget management system to replace Excel-based manual processes used to support approvals and monitor performance. • Consider use or replacement of project scheduling and selection tools (SOS and Primavera)			
2d. Establish an integrated operational and financial performance monitoring framework and incorporate it into regular management and reporting processes.	• Review EAMS requirements compared to desired managerial reporting capabilities (e.g. workforce management, inventory management) • Pilot an integrated operational and financial performance monitoring framework in one to two areas (e.g. inventory, fleet, overtime) » Define roles & responsibilities in LIPA and PSEG Long Island » Associate large cost categories with underlying cost drivers » Incorporate cost driver metrics into budget and variance reporting » Establish a monthly departmental meeting between LIPA and PSEG Long Island to review integrated reports	• Integrate EAMS Reporting into Operational and Financial Performance Monitoring Framework • Roll out integrated reporting framework to all departments • Establish a feedback mechanism to learn whether managers are getting the information they need and refine reports accordingly			

2e. Enhance storm response cost transparency and FEMA grant management	• Define objectives for storm cost and FEMA grant review function and determine whether objectives are being met. • Assess capacities and capabilities at LIPA and PSEGLI to meet the objectives and determine what do we need to be successful. • Define an insightful storm dashboard and develop standard reporting on key cost drivers per storm including operational response plans for each storm category and compare that to actual response	• Review the effectiveness of storm cost and FEMA grant review function compared to KPIs			

3 Enhance LIPA's financial operations

OBJECTIVES	2023	2024	2025	2026	2027
3a. Implement new Treasury management system to enhance operational efficiencies and cash	• Implement Treasury Management System and realize operational efficiencies	• Enhance cash expenditures forecasting tools and management			
3b. Optimize insurance management	• Complete insurance optimization study of property, casualty, and health care, including examining an owner-controlled insurance program	• Seek legislation to establish a captive insurer • Establish a captive insurer for cost savings			
3c. Use AMI information and enhanced analytics of CAS data to improve the management of operating revenues and cash receipts through enhanced capabilities to forecast and assess: changes in customer usage patterns; resulting sales and revenues; anticipated cash receipts; and the performance of the recovery mechanisms	• Develop a model for translating daily use and revenue into billed revenue and daily cash receipts based on recent actual experience • Develop processes for using customer AMI data to measure daily use and explain the resulting budget variances in energy sales, and revenues • Update the factors used to estimate the Reserve for Uncollectible Revenue and Bad Debt Expense	• Refine the segmentation of residential and commercial customer usage to explain year-over-year variances • Complete a benchmarking review by an independent consultant of LIPA's revenue forecasting, cash flow forecasting, and variance tracking processes	• Develop forecasts using the refined segmentation of residential and commercial customer usage	• Use the daily and hourly load trends identified in the AMI data to implement marketing and pricing opportunities	

INFORMATION TECHNOLOGY

GOAL HIGHLIGHTS

1

Ensure that systems implementations deliver on business requirements in a timely and cost-effective manner

a) Proactively manage project implementation for planned systems modernization initiatives

2

Establish dedicated and independently operable information technology, operational technology, and cybersecurity systems for Long Island operations

a) Execute the Board-approved plan to separate 46 Long Island IT systems and support organizations currently intermingled with PSEG corporate systems and structures

3

Ensure that technology platforms are robust and provide operational stability

a) Develop robust business continuity and disaster response plans for all critical systems and processes and independently verify emergency restoration plans and IT systems testing
b) Ensure all IT and OT assets are within their active service life and under general support from the product vendor

4

Protect IT systems and customer, employee, and third-party data from unauthorized access or disruption

a) Build a dedicated cyber security organization for Long Island capable of developing and managing a cyber security program
b) Conduct regular vulnerability assessments and penetration testing of all information and operational technology systems and promptly mitigate vulnerabilities
c) Communicate how customer information is collected, used, and disclosed, and ensure that third-party users of customer information have robust information security practices

5

Strengthen long-term IT and OT systems planning

a) Develop and implement technology strategies to anticipate future business needs and ensure systems coherence

6

Strengthen the capacity of the IT organization

a) Establish a dedicated IT management team for Long Island operations and advance IT organizational maturity as measured by industry standard models
b) Design and implement an IT governance structure to guide IT delivery across multiple enterprise goals
c) Establish a Long Island-based Project Management Office responsible for implementing large IT projects
d) Develop third-party contracting resources to meet Long Island needs

1 Ensure that systems implementations deliver on business requirements in a timely and cost-effective manner

Figure 6: Indicative implementation plan for key systems modernization initiatives

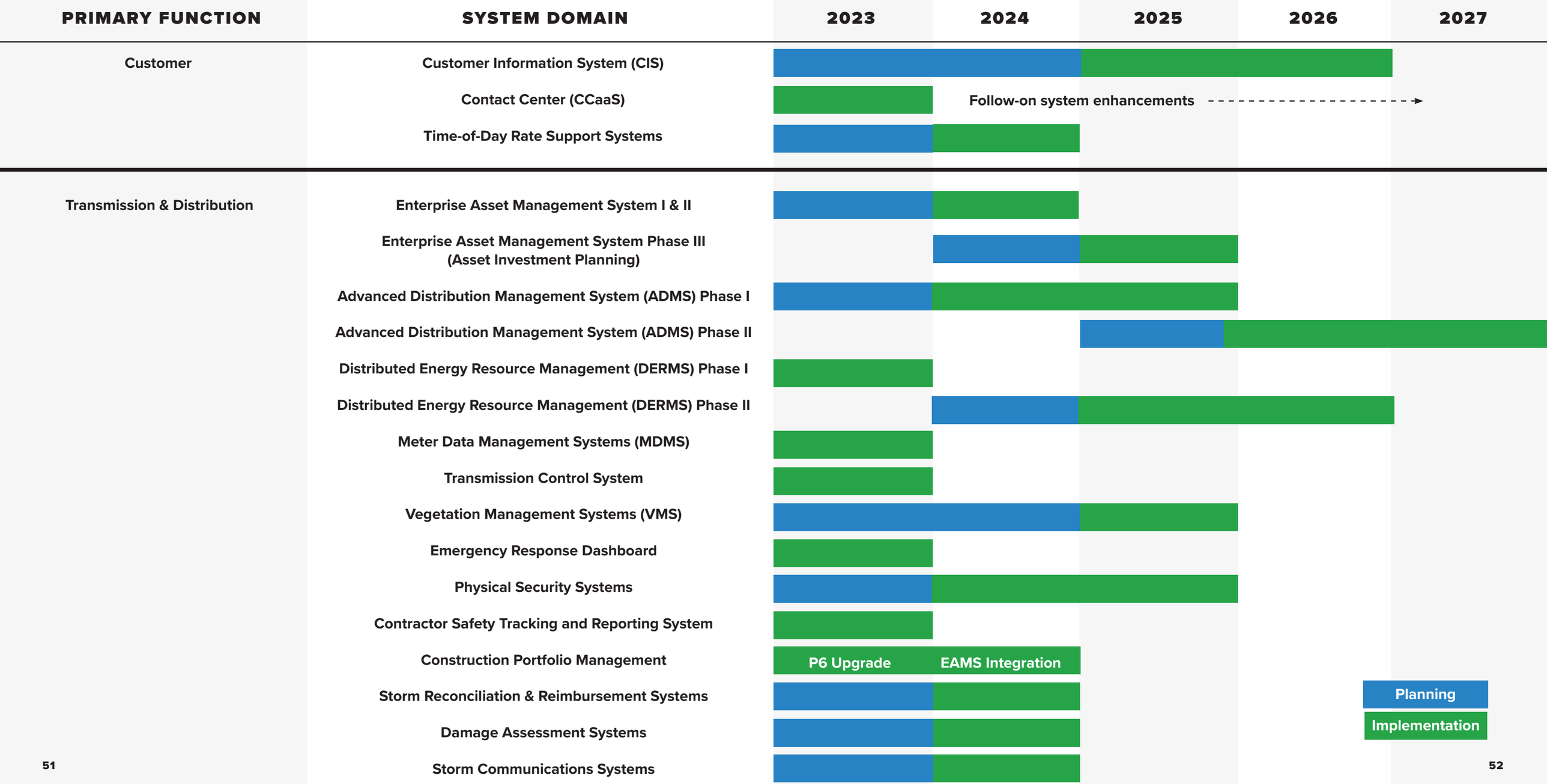


Figure 7: Indicative implementation plan for key systems modernization initiatives (continued)

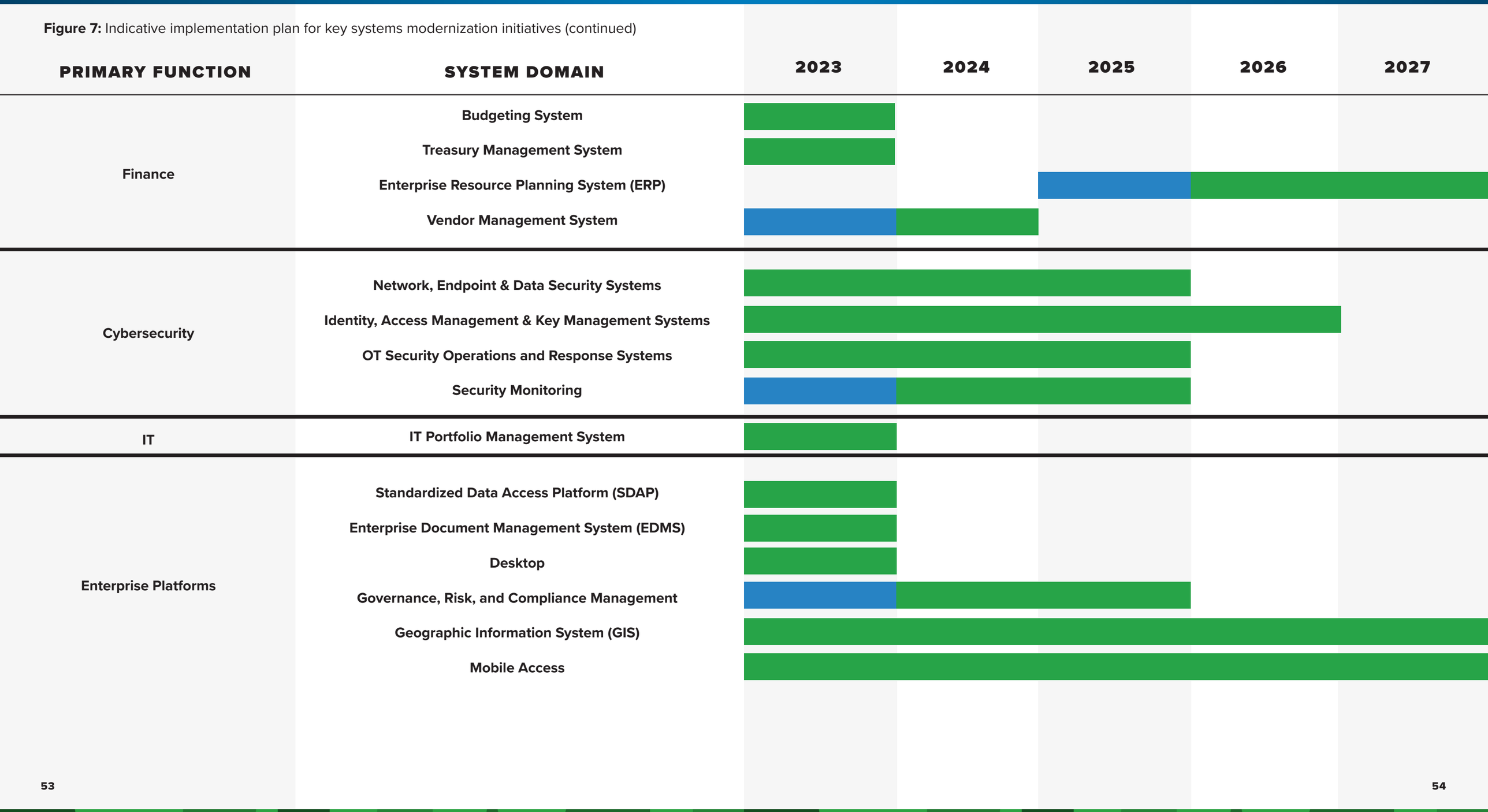
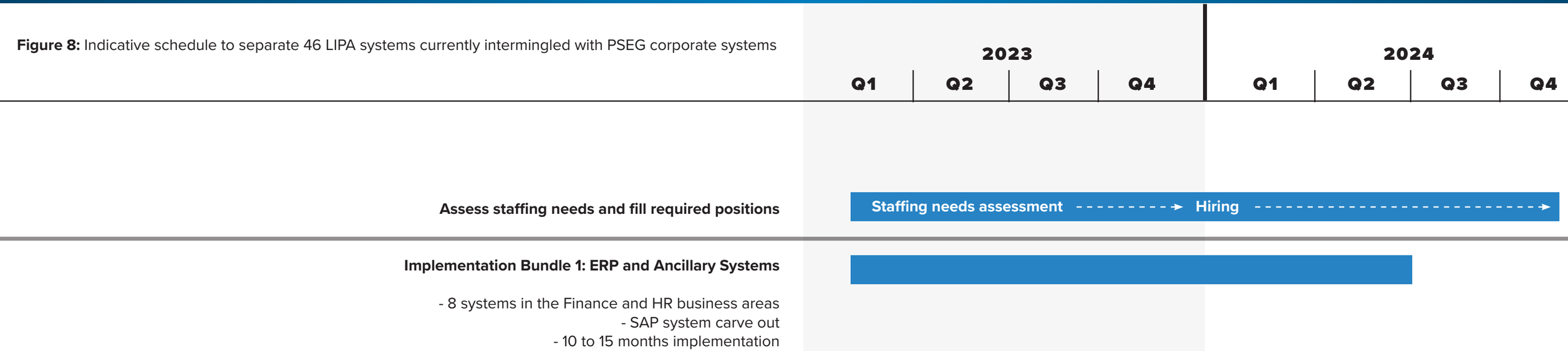


Figure 8: Indicative schedule to separate 46 LIPA systems currently intermingled with PSEG corporate systems



3 Ensure that technology platforms are robust and provide operational stability

OBJECTIVES	2023	2024	2025	2026	2027
3a. Develop robust business continuity and disaster response plans for all critical systems and processes and independently verify emergency restoration plans and IT systems testing	• Establish criteria and categorize functions and systems based on criticality • Map business processes for critical functions and systems • Review technology architecture for all critical systems and implement high availability opportunities • Develop Business Impact Analyses, Disaster Recovery Plans, and Business Continuity Plans for all critical systems and address identified quality concerns • Conduct testing exercises » Wave 1 systems by 6/30/23 » Wave 2 systems by 10/1/23 » Wave 3 systems by 11/15/23	• Update Disaster Recovery Plans and Business Continuity Plans for all critical systems annually • Evaluate needs and requirements for an automated business continuity management system • Expand Disaster Recovery Plans and Business Continuity Plans for the next tier of systems	• Develop Business Impact Analyses, Disaster Recovery Plans, and Business Continuity Plans for Wave 4+ systems and conduct testing exercises • Assess need for a data bunker for cyber event protection and restoration	→	→
3b. Ensure all IT and OT assets are within their active service life and under general support from the product vendor	• Develop an IT/OT asset lifecycle management and governance framework • Develop an updated IT and OT asset inventory with lifecycle indicators • Update the 2-year Refresh Plan to account for any relevant changes and complete planned for the current year • Complete Life Cycle Planning (LCP) projects budgeted for 2023	→	→	→	→

4 Protect IT systems and customer, employee, and third-party data from unauthorized access or disruption

4a. Build a dedicated cyber security organization for Long Island fully capable of developing, managing, and supporting a cyber security program	• Complete hiring for critical positions identified in Cyber Organization Re-design plan • Conduct a Cyber Security Organization study to determine appropriate structure, staffing, and capabilities	→	• Implement recommendations from the Cyber Security Organization Study		

OBJECTIVES	2023	2024	2025	2026	2027
4b. Conduct regular vulnerability assessments and penetration testing of all information and operational technology systems and promptly mitigate vulnerabilities	• Conduct quarterly internal vulnerability assessments for all IT assets and promptly address vulnerabilities → • Conduct annual third-party vulnerability assessments and penetration testing of all information and operational technology systems → • Conduct an annual independent evaluation of cyber security maturity and implement recommendations necessary to meet a level 3 or higher on the NIST Cybersecurity Framework →				
4c. Communicate how customer information is collected, used, and disclosed and ensure that third-party users of customer information have robust information security practices	• Address 2022 third-party risk audit findings	• Conduct a biennial third-party risk assessment and address identified gaps →			

5 Strengthen long-term IT and OT systems planning

5a. Develop and implement technology strategies to anticipate future business needs and ensure systems coherence	• Develop and implement a **Data Center and Cloud Strategy** → » Cloud strategy and policy » Security strategy for all cloud and on premises IT and OT systems » Zero Trust Network strategy • Develop and implement an enterprise-wide **Data Warehousing and Analytics Strategy** → » Map business data sources and prioritize use cases » Identify required tools and systems » Identify data analytics capability gaps • Establish a **Mobile Center of Excellence** to develop a mobile framework, standards, and guidelines, and oversee mobile application development consistent with the Long-Term Enterprise Mobility Plan →		• Plan for the future of OMS • Develop and implement a long-term systems replacement & technology modernization strategy covering key system domains → » Long term IT architecture and systems integration » Core vendor partners		

6 Strengthen the capacity of the IT organization

OBJECTIVES	2023	2024	2025	2026	2027
6a. Establish a dedicated IT management team for Long Island operations and advance IT organizational maturity as measured by industry	• Fill all approved IT management positions • Follow CMMI Level 3 processes in the Doing and Managing categories for all projects initiated on or after 9/1/22 • Follow CMMI Level 3 processes in all categories for all projects initiated on or after 5/1/23	• Conduct a comprehensive organizational structure, capacity, and readiness assessment of the Long Island IT organization, including alignment with systems separation requirements • Conduct a CMMI Process Benchmark Appraisal • Conduct an ITIL maturity model assessment and implement identified business process improvements	• Implement recommendations from the IT organizational assessment →	→	
6b. Design and implement an IT governance structure to guide IT delivery across multiple enterprise goals	• Identify IT governance gaps and needs • Develop the terms of reference and form a Joint LIPA-PSEG Long Island System Planning Advisory Committee • Pilot the Joint Advisory Committee with 2 to 3 large systems initiatives • Plan and implement an IT Portfolio Planning System	• Expand Joint System Planning Advisory Committee role to cover all business areas			
6c. Establish a Long Island-based Project Management Office (PMO) responsible for implementing large IT projects	• Hire a Director of Project Management • Develop a PMO charter and staffing plan • Develop PMO capacity to manage at least 10 medium-sized (>$1m) projects	• Conduct a third-party assessment of PMO performance • Expand capacity to manage at least 25 medium- and large-scale projects			
6d. Develop third-party contracting resources to meet Long Island needs (i.e., systems implementation, specialized studies, staff augmentation)	• Conduct an inventory of current contracting services	• Develop and implement a procurement plan and procurement vehicles for Long Island IT contracting services			

PERFORMANCE MANAGEMENT

GOAL HIGHLIGHTS

1

Ensure that key provisions of the 2nd A&R OSA intended to enhance performance are fully and successfully implemented

a) Socialize key contractual changes within LIPA and PSEG Long Island
b) Build the capacity in LIPA and PSEG Long Island to effectively employ performance management mechanisms provided by the 2nd A&R OSA (IV&V, metrics, manager performance evaluation)

2

Create a performance management culture across LIPA and PSEG Long Island

a) Define clear performance expectations and standards for the service provider
b) Continually identify and integrate best practices of industry-leading utilities
c) Strengthen vendor management capabilities within LIPA

3

Ensure that the next OSA reflects LIPA's accumulated knowledge and experience on performance management

a) Document the lessons learned on performance management and integrate them into the vendor selection process and contractual framework for the next OSA

4

Prepare for the potential transition of PSEG affiliate functions at the end of the current contract in 2025

a) Document and review the processes and services provided by PSEG affiliates and identify sourcing alternatives

1 Ensure that key provisions of the 2nd A&R OSA intended to enhance performance are fully and successfully implemented

OBJECTIVES	2023	2024	2025
1a. Socialize key contractual changes within LIPA and PSEG Long Island	• Designate a resource in the LIPA Legal department to help LIPA staff interpret and apply terms of the 2nd revised OSA in particular circumstances • Develop and implement mechanisms (e.g. series of short videos) for communicating and educating LIPA and PSEG Long Island staff on key changes and provisions in the new OSA	• Ensure areas of the OSA where there is not sufficient clarity currently are identified and fully addressed in the next OSA (see goal 3)	
1b. Build the capacity in LIPA and PSEG Long Island to effectively employ performance management mechanisms provided by the 2nd A&R OSA: **Independent Verification and Validation (IV&V)**	• Develop a guiding framework on IV&V » What it means » Depth of analysis » Required artifacts and evidence • Develop standardized reporting templates that also meet the specific needs of each scope-function. • Define data access requirements and implement data access platform for routinely accessed data • Define specific skills for IV&V, assess skill gaps, and train LIPA SMEs • Develop and deliver an introductory training package on IV&V for PSEG Long Island executives and managers • Review and report on PSEG Long Island adherence to compliance with the IV&V framework as a part of annual manager evaluations	• Fully integrate the data access platform into the IV&V process • Refine IV&V framework and training packages based on lessons learned • Implement remedial training and procedures as needed	
1b. Build the capacity in LIPA and PSEG Long Island to effectively employ performance management mechanisms provided by the 2nd A&R OSA: **Compensation-linked Performance Metrics**	• Develop a guiding framework on designing performance metrics • What constitutes a ‘good’ metric? • How and when to utilize different types of metrics: » Quantitative vs. qualitative/project-based » Fundamental vs. incremental vs. innovation • How to incorporate ‘stretch’ goals and incentivize continuous improvement? • How to structure compensation incentives? • What does “reasonable approval” mean? • How to advance short-term vs. long-term objectives using metrics? • Conduct training on metric design across LIPA	• Revisit and refine the metric design framework based on lessons learned • Incorporate lessons learned on metric design into the contractual framework of the next OSA (see goal 3)	

1b. Build the capacity in LIPA and PSEG Long Island to effectively employ performance management mechanisms provided by the 2nd A&R OSA: **PSEG Long Island Manager Performance Evaluation**	• Define clear standards for PSEG Long Island senior managers, including competencies, capabilities, and performance expectations for associated scope functions (including progress on metrics) • Develop the process and tools for annual senior manager assessment • Conduct first assessments of PSEG Long Island senior managers	• Assess and refine the manager performance evaluation process as appropriate • Enforce terms of the 2nd A&R OSA regarding compensation and prospects for promotion for managers that repeatedly fail to meet standards	

2 Create a performance management culture across LIPA and PSEG Long Island

OBJECTIVES	2023	2024	2025
2a. Define clear performance expectations and standards for the service provider	• Create a unique set of quality standards for each of 5 key deliverables/work products where content quality is highly variable or consistently below expectations (e.g. project plans, project justification documents, IT test plans, business continuity plans, Requirements Traceability Matrixes (RTMs), budget proposals and cost estimates, statements of work, service level agreements, change orders, performance and project reporting) » Standards should focus on content quality rather than template design and should combine common standards for all deliverables of a given type as well as any function specific requirements • Socialize quality standards across LIPA and PSEG Long Island using concrete examples of deliverables that do and do not meet standards. • Set clear standards for project management performance » Identify appropriate project management standards (e.g. CMMI) that are specific to the individual requirements in each key functional area, to the extent that they exist. » Provide feedback on content and quality of PSEG Long Island project management training • Demonstrate the effective use of the standards and templates through the successful execution of metrics and project plans	• Develop quality standards for an additional 3 to 5 deliverables/work products • Review current year work products and deliverables against standards and refine standards based on experience • Review project management standards and refine based on experience • Conduct a maturity assessment against industry project management standards in select functional areas and develop a roadmap to address gaps	• Develop quality standards for an additional 3 to 5 deliverables/work products • Implement functional roadmaps to strengthen project management capabilities

2b. Continually identify and integrate best practices of industry-leading utilities	• Set clear expectations for LIPA SMEs for developing and defining business process/practice enhancement ideas • Review staffing of existing industry participation and create additional opportunities for LIPA staff to gain exposure to emerging/innovative practices » Identify relevant conferences/industry groups for LIPA SMEs and encourage active participation • Strengthen LIPA's skills for selectively integrating industry best practices within Long Island operations (building on lessons from current initiatives in Fleet and Overtime), including SME skills development in » Identifying and engaging through an RFQ solicitation a catalog of qualified consultant(s) that are qualified to conduct due diligence on industry best practices and their appropriateness to LIPA's situation » Evaluating current practices against industry-leading standards and prioritizing gaps » Creating a detailed project plan and implementation roadmap as part of ongoing departmental roadmap efforts to address gap areas	• Identify best practice enhancement opportunities in all scope areas and prioritize initiatives for implementation • Review effectiveness of industry group participation by LIPA SMEs in terms of value-added to LIPA customers • Document the use of the catalog of consulting resources developed from the 2023 RFQ solicitation to quickly identify available resources best suited to address LIPA's needs
2c. Strengthen vendor management capabilities within LIPA	• Define required competencies for effective vendor management (including those that go beyond IV&V, metrics, and manager evaluation in goal 1 above) • Map competencies to LIPA roles (e.g. Executive Sponsors, Project Managers) • Assess current capabilities and develop a roadmap to address identified gaps via training, business process reforms, and/or standards • Identify, solicit, and engage a pool of qualified consultants with specific vendor management skill sets that LIPA can turn to for specific support needs (i.e., a "contractor on call" program)	• Implement vendor management roadmap priorities • Assess whether and how LIPA's vendor management tools and training can be adapted and applied to help build vendor management capabilities in PSEG Long Island

3 Ensure that the next OSA reflects LIPA's accumulated knowledge and experience on performance management

3a. Document the lessons learned on performance management and integrate them into the vendor selection process (RFQ, RFP, etc.) and contractual framework for the next OSA	• Take stock of performance management frameworks and approaches and distill lessons learned to shape the next OSA • Create a shared repository for LIPA staff to quickly document lessons and concerns with the current OSA as they emerge which begins with and includes observations already acquired through the present (2022). • Incorporate relevant aspects of LIPA's performance management model and approach (e.g. service provider performance expectations by scope function) into bid solicitation processes as appropriate	• Incorporate lessons learned on performance management into the framework of the next OSA, including: » Contractual terms, roles, obligations » Guiding frameworks for performance management mechanisms (e.g. IV&V, metrics) » Function-specific performance expectations and best practices » Processes for senior manager evaluation

4 Prepare for the potential transition of PSEG affiliate functions at the end of the current contract in 2025

OBJECTIVES	2023	2024	2025
4a. Document and review the processes and services provided by PSEG affiliates and identify sourcing alternatives	• Across all departments, assess functions provided by PSEG affiliates, including a top-down review of all existing contracts that support PSEG affiliate functions, and explore sourcing alternatives		