

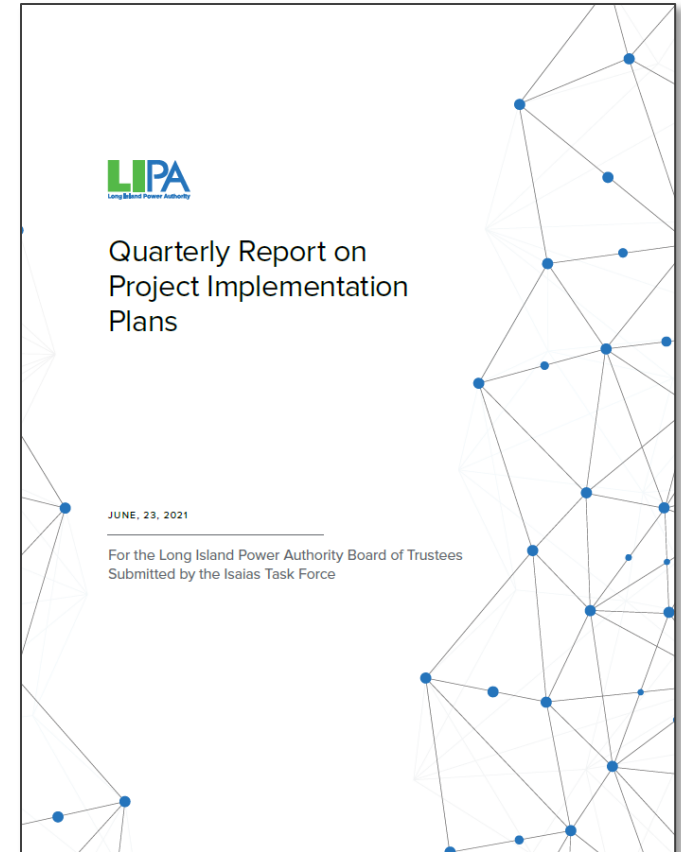


QUARTERLY REPORT ON PROJECT IMPLEMENTATION PLANS

June 23, 2021

OVERVIEW

- The Quarterly Report displays the status of each of the **79 Isaias Task Force Project Implementation Plans** (PIPs). The PIPs are designed to correct the performance shortcomings identified in LIPA's investigation of PSEG Long Island's failed response to Tropical Storm Isaias
- The Board has also adopted **74 recommendations to correct other management deficiencies** unrelated to the storm response
- The Quarterly Report shows a **“big picture” summary** of the status of the PSEG Long Island communications and Outage Management System (OMS), which failed during Isaias, worsening the impact of the tropical storm on customers and the public



ISAIAS TASK FORCE PIP STATUS (JUNE 2021)

ITF Board Recommendations (85)



Project Implementation Plans (79)



June 2021 Report

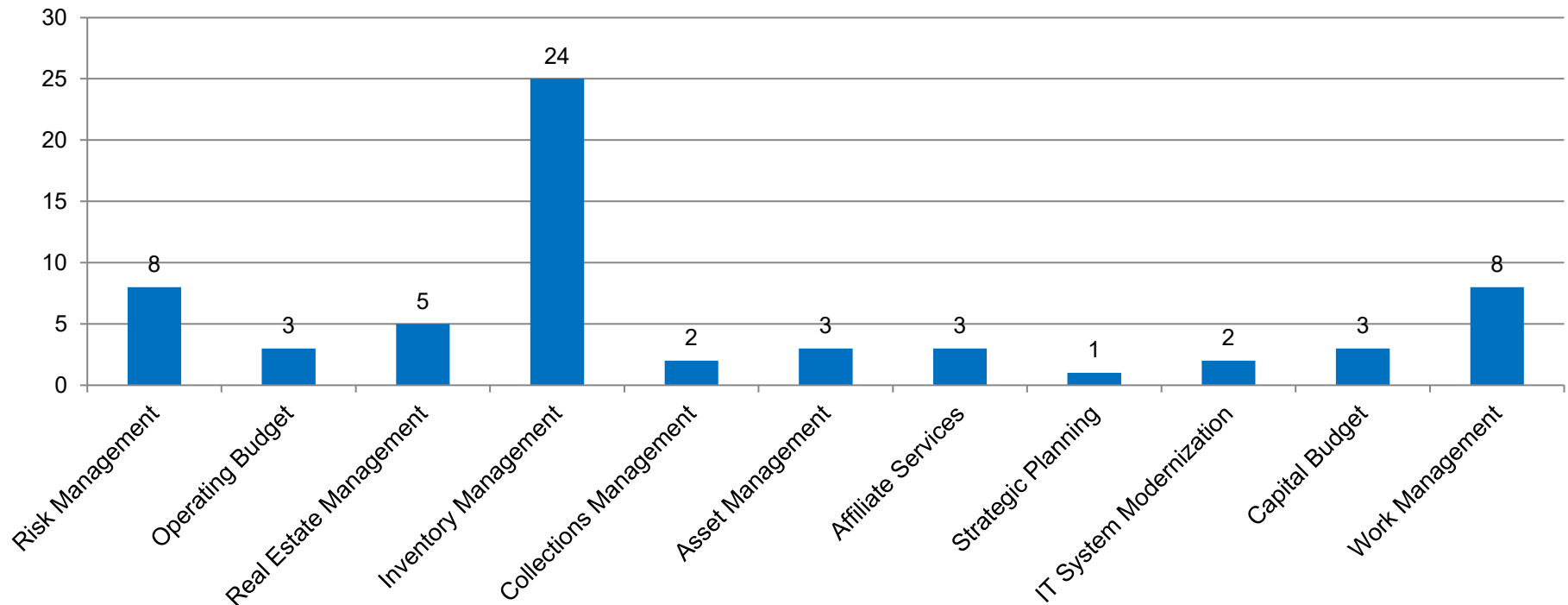
Delayed	On Schedule	No Status Reports	No Approved PIPs	PIP is Deferred	Closed	Previously Completed	Total
19	4	10	16	9	2	19	79

PSEG Long Island's implementation of the PIPs have fallen behind in 3 ways:

- There are many delays in completing the tasks called for in the PIPs
- There are still areas where PSEG Long Island has not provided acceptable PIPs
- For some PIPs, PSEG Long Island has not provided Status Reports

ADDITIONAL RECOMMENDATIONS

In addition to the 79 Isaias Task Force PIPs, the LIPA Board has adopted **74 recommendations addressing deficiencies in 11 non-storm operational and management areas**. These 74 recommendations have resulted in 62 PIPs. Most of these PIPs are still in the early stages of execution



STATUS OF REMEDIATION OF PSEG LONG ISLAND COMMUNICATIONS AND OMS

- PSEG Long Island recently completed an end-to-end system test of the communications and OMS systems that **PSEG Long Island reports meets its acceptance criteria**
- This is progress and **systems are no doubt in better shape than last year**
- **LIPA is independently verifying and validating the test.** LIPA's review so far has found certain unexplained inconsistencies in expected versus actual results and gaps in the level of test coverage in processing customer text messages. Tests are done on weekends and off-hours rather than during regular and peak times
- LIPA's recommendations to PSEG Long Island had the following key requirements:
 - Systematically analyze and test the failure modes of the system to **identify the true root causes of the observed defects**
 - Ensure that your test designs **comprehensively and completely exercise all end-to-end processes** (across each channel) as might be encountered in a future storm scenario like Isaias or worse
 - **Focus on fixing OMS version 6.7 or later** and not the now obsolete (and unsupported) version 5.5 of the system
 - **Build robust Business Continuity Plans** as a contingency measure

STATUS OF REMEDIATION OF PSEG LONG ISLAND COMMUNICATIONS AND OMS

- Much of the recent testing has been done of **version 5.5 of OMS** which is an old version of the software than nobody uses except for PSEG Long Island and PSE&G in New Jersey. This product has been abandoned by the CGI in favor of version 6.7 of the product. Some utility customers are even testing version 7.x of the OMS system. Version 5.5 of the OMS is also running on 7-year-old hardware on an operating platform that the vendor has retired
- Before the remediations of the communications and OMS can be considered complete **PSEG Long Island needs to move to a current, supported system** – version 6.7 or later – and test that system
- PSEG Long Island was **unable to meet its own project deliverables** to implement version 6.7 by June and is now planning to move to version 6.7 **after the storm season**

BUSINESS CONTINUITY PLANS

- The 90-Day Report identified the **lack of adequate Business Continuity Plans** (BCPs) as a significant management failure and recommended the development of comprehensive BCPs for all mission-critical systems and processes to enable graceful recovery from technology failures
- PSEG Long Island submitted a “Restoration Contingency Plan for Critical System Failures” and a major deficiency was that it focused on the last incidence of failure (OMS and telephony) and did not take a broader view of the potential failures of many other mission-critical systems
- PSEG Long Island has performed:
 - A tabletop drill of OMS and telephony failures (January 2021)
 - A functional Exercise of BCP Work-Around (April 2021)
 - Emergency Scenario Exercises (May 2021)
 - The annual Hurricane Tabletop Exercise (June 2021)
- While progress has been made on the BCPs, there is still significant work to be done. PSEG Long Island reports the **BCP PIP as Delayed**, with a projected end date of 8/27/2021 instead of 7/30/2021. LIPA continues to review PSEG Long Island system workarounds, providing feedback, and encouraging them to conduct real-world exercises



Affiliate Services

RECOMMENDATIONS FOR AFFILIATE SERVICES

At its March meeting, the LIPA Board adopted the following recommendations related to affiliate services and transfer of ServCo employees to other PSEG business units:

1. Enhanced Affiliate Budget Transparency
 2. Enhanced Affiliate Actual Cost Transparency
 3. Require Approval before Transferring Former ServCo Employees
- During May 2021, PSEG Long Island submitted 3 PIPs to address the Board recommendations on affiliate services
 - LIPA Staff evaluated the submitted PIPs and was not able to recommend the proposed plans for Recommendations 1 and 2 at the May meeting. LIPA had concerns regarding the scope of the proposed PIPs as well as the implementation schedule. Only the PIP for Recommendation 3, regarding the hiring of ServCo staff, was brought to the Board in May
 - Subsequently, LIPA worked with PSEG Long Island to modify the PIPs for Recommendations 1 and 2. PSEG Long Island submitted revised PIPs on June 16 that address all LIPA concerns. The PIPs for Recommendations 1 and 2 outline a reasonable plan that enhances the transparency on the use of affiliate services to supplement PSEG Long Island from a budget & planning perspective as well as from an actual use & cost perspective



Work Management

RECOMMENDATIONS FOR WORK MANAGEMENT

In 2020, PSEG Long Island engaged an outside consultant to assess PSEG Long Island's work management operations and progress toward addressing the findings of the 2013 and 2018 DPS Audit reports. LIPA staff reviewed the consultant's report and proposes that PSEG Long Island develop PIPs for the following 8 recommendations related to work management:

1. Develop best practice-based work management processes
2. Develop processes and systems to improve planning and tracking of work
3. Improve and standardize estimating, compatible unit estimates, and task list management
4. Implement aligned annual work plan and short-term scheduling/dispatch
5. Enable mobile and field management
6. Improve work management metrics
7. Clarify and rationalize work management roles
8. Implement work prioritization



Asset Management Board Policy

RECOMMENDATIONS FOR ASSET MANAGEMENT

At its March meeting, the LIPA Board adopted 7 Asset Management Recommendations for implementation by PSEG Long Island, including:

- Adopt the ISO Asset Management Framework and develop a 3-year roadmap to ISO 55001 compliance
- Conduct Annual Reliability Assessment of Plant Asset Performance
- Develop Comprehensive Asset Management Plans
- Capture Additional Data into the Computerized Maintenance Management System (CMMS)
- Strategic Asset Management Plan (SAMP) Implement Enterprise Asset Management System (EAMS)
- Implement an Enterprise Asset Management System
- Conduct a System-wide Physical Inventory of Outside Plant Assets

BOARD POLICY ON ASSET MANAGEMENT

Policy: Maintain a robust Asset Management system for the safe, reliable, and cost-effective operation of the transmission and distribution system managed by its Service Provider

LIPA and PSEG Long Island will:

- Adopt the ISO Asset Management Framework that encompasses industry leading practices and achieve a maturity goal of 3.0 or greater by the end of 2023
- Develop and maintain a modern enterprise asset management system (EAMS) for asset-related work management, capturing, managing, and reporting on all strategic and operational assets

Board Policy: Asset Management
Policy Type: Operating
Monitored by: Oversight and Clean Energy Committee
Board Resolution: #xxxx, approved June 23, 2021



Board Policy on Asset Management

It is the policy of the Long Island Power Authority ("LIPA") to maintain a robust Asset Management system for the safe, reliable, and cost-effective operation of the transmission and distribution system managed by its Service Provider. LIPA and its Service Provider will take prudent and reasonable measures to accomplish the following:

- Adopt the ISO Asset Management Framework that encompasses industry leading practices and achieve a maturity goal of 3.0 or greater by the end of 2023. This includes:
 - Maintaining a long-range asset management focus on electric distribution, substation and transmission equipment, by emphasizing risk and gap analysis, reliability centered maintenance, lifecycle cost techniques, and financial and operational metrics to improve and achieve key performance indicators (e.g. age, manufacturer, failure modes, failure rates, cost to maintain, life expectancy, end of life determination, etc.)
 - Developing asset risk and lifecycle strategies, asset health indexing, asset condition and criticality, and preventive / predictive maintenance strategies.
 - Ensuring accountability for annual test and inspect plan input, annual replacement capital work plan input, asset standards, and decisions on asset replacements.
 - Ensuring material condition (life cycle) strategies are maintained, and equipment is replaced based on these strategies so as to maintain a high level of system reliability.
- Develop and maintain a modern enterprise asset management system ("EAMS") for asset-related work management, capturing, managing, and reporting on all strategic and operational assets, defining the relationships between those assets, and assessing the effectiveness and efficiencies of those assets. This EAMS will become the foundation of the utility's data-driven asset management decision processes. The EAMS will include a computerized multi-year component/equipment performance history to determine the effectiveness of the reliability programs.

The Chief Executive Officer, or his or her designee, will report annually to the Oversight and Clean Energy Committee on the key provisions of this Policy.



Discussion