



QUARTERLY REPORT ON TROPICAL STORM ISAIAS AND MANAGEMENT RECOMMENDATIONS

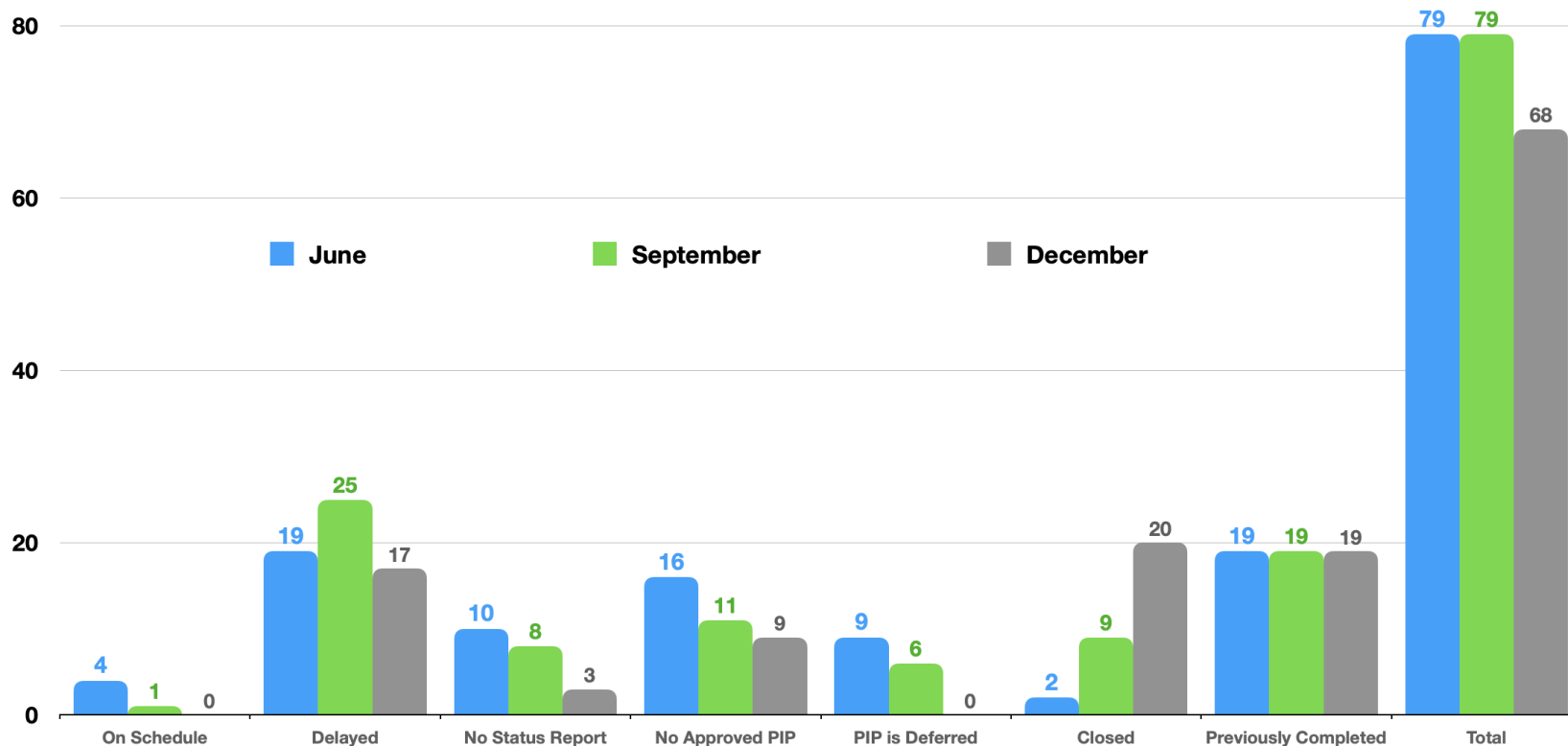
DECEMBER 15, 2021

OVERVIEW

- Quarterly Report provides the status of:
 - **78 Isaias Task Force Project Implementation Plans (PIPs)**
 - **68 Management PIPs** to correct other PSEG Long Island operational deficiencies
- The Board has directed LIPA staff to:
 - Monitor PSEG Long Island's execution of the PIPs
 - Independently verify and validate (IV&V) the remediation of each recommendation
 - Report to the Board Quarterly until all PIPs are complete



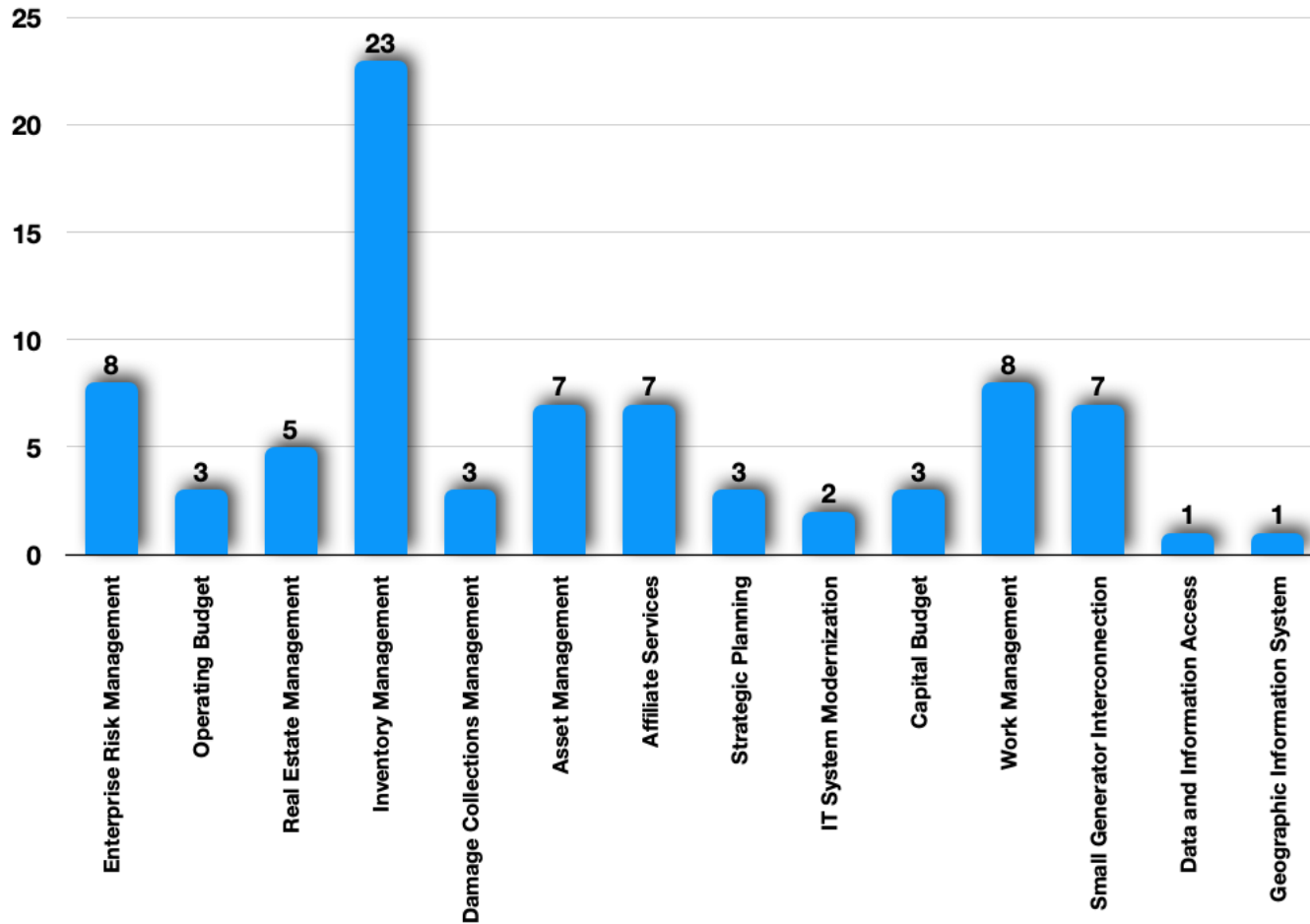
ISAIAS TASK FORCE PIP STATUS



10 of the recommendations have now been incorporated into the 2022 OSA Performance Metrics with new negotiated dates and targets; and will be reported on with respect to the terms of the relevant metrics starting in 2022, contingent on OSA approval. These recommendations are not included in the statistics in this chart.

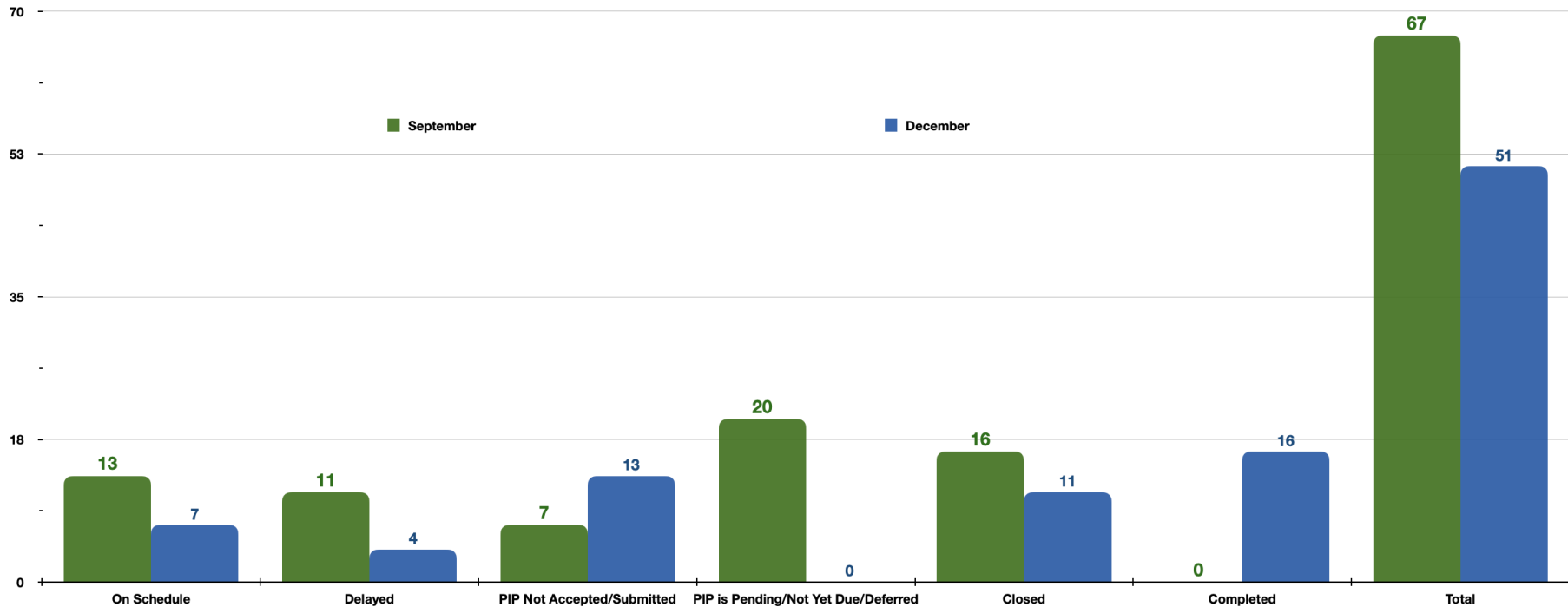
MANAGEMENT RECOMMENDATIONS

In addition to the 78 Task Force projects, the LIPA Board has adopted **83 Management Recommendations** addressing deficiencies in 13 non-storm operational areas



MANAGEMENT PIPS STATUS

83 Management recommendations have resulted in **68** PIPs. Most of these PIPs are still in the early stages of execution.



17 of the recommendations have now been incorporated into the 2022 OSA Performance Metrics with new negotiated dates and targets; and will be reported on with respect to the terms of the relevant metrics starting in 2022, contingent on OSA approval. These recommendations are not included in the statistics in this chart.

STATUS OF REMEDIATION OF PSEG LONG ISLAND COMMUNICATIONS AND OMS

- **Communications systems and OMS are in significantly better shape than last year.**
- **However, PSEG Long Island still needs to complete the necessary remediations, particularly for the OMS, which remains on an out-of-date out-of-general-use version (v5.5) of the software.**
 - OMS v 5.5 is only used by two utilities – PSEG Long Island and PSE&G in New Jersey – and is running on 7-year-old hardware on an operating platform that the vendor has retired.
- 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

- **PSEG Long Island is now preparing to deploy a remediated OMS version 6.7 on new hardware in January 2022**, with performance testing currently in progress.
- PSEG Long Island had initially planned to deploy OMS 6.7 in June 2021 but was unable to meet their proposed timeline. The current planned deployment in January 2022 is also a further delay from the previously reported planned deployment date of November 2021.
- The recent delay was necessitated by issues that surfaced during initial performance testing, which PSEG Long Island has made good progress in addressing.
- Delaying the deployment in order to address critical issues is undoubtedly preferable to deploying defective software, as occurred prior to Tropical Storm Isaias, and we are encouraged by the efforts of PSEG Long Island and the software vendor (CGI) in identifying and resolving the issues once they occurred.
- However, PSEG Long Island must remain cognizant of the risks of remaining on the unsupported OMS 5.5 version and move forward with urgency.

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
- In response, PSEG Long Island submitted a “Restoration Contingency Plan for Critical System Failures.” 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)
 - Review sessions with LIPA on proposed work-arounds for system failures (continuing)
- While PSEG Long Island has made progress on the BCPs, there is still significant work to be done. LIPA continues to review PSEG Long Island system workarounds, provide feedback, and encourage them to conduct real-world exercises; and has been assured that PSEG Long Island's 2022 workplan will continue to refine the BCPs and undertake real-world exercises that validate the plans.

Discussion

FOR CONSIDERATION

December 15, 2021

TO: The Board of Trustees

FROM: Thomas Falcone

SUBJECT: Consideration of Adoption of the Isaias Task Force Quarterly Report

Requested Action

The Board of Trustees (the “Board”) of the Long Island Power Authority (“LIPA”) is requested to approve a resolution adopting the third Isaias Task Force (the “Task Force”) Quarterly Report (the “Quarterly Report”), which resolution is attached hereto as **Exhibit “A.”**

Background

On Tuesday, August 4, 2020, Tropical Storm Isaias landed on Long Island with rain and wind gusts of up to 70 miles per hour. The resulting damage to the electrical system caused approximately 646,000 customer outages.

On August 5, LIPA’s Chief Executive Officer initiated an independent investigation of the circumstances and root causes that led to well-documented lapses in PSEG Long Island’s storm response. The Task Force was charged with providing actionable recommendations and overseeing PSEG Long Island’s remediation activities.

The Task Force presented a 30-Day Report to the Board on September 23, 2020, and a 90-Day Report to the Board on November 18, 2020. As set forth in Appendix 2 and Appendix 3 of the 90-Day Report, the Task Force provided actionable recommendations for the Board’s consideration (the “Task Force Recommendations”).

Between November 2020 and this Board meeting, the Board adopted various Project Implementation Plans (PIPs) for the Task Force Recommendations and directed PSEG Long Island to resubmit certain PIPs to address the Board’s objectives better.

Additionally, between December 2020 and this meeting, the Board adopted recommendations covering operational areas, including risk management, budgeting and reporting, real estate, asset management, inventory management, collections, affiliate services, strategic planning, information technology, small generator interconnection, workforce management, and data access, among others (the “Management Recommendations”).

In total, the Board has adopted 168 recommendations resulting in 146 PIPs, which are in various stages of implementation by PSEG Long Island. The Board has directed LIPA Staff to submit quarterly status updates on the implementation of each of these PIPs in the form of Quarterly Reports. The Board adopted the first Quarterly Report on June 23, 2021, and the second Quarterly

Report on September 22, 2021. The Quarterly Reports address the status of each recommendation based on PSEG Long Island's monthly status reporting to LIPA. The reports also describe the status of LIPA's independent verification and validation of the remediation of each recommendation.

The Third Quarterly Report

The third Quarterly Report, attached hereto as **Exhibit "B,"** summarizes the status of each of the Task Force and Management Recommendations. The Quarterly Report pays particular attention to describing the progress made since September 2021.

Recommendation

Based upon the foregoing, I recommend approval of the above requested action by adoption of a resolution in the form attached hereto.

Attachments

Exhibit "A" Resolution
Exhibit "B" Quarterly Report

RESOLUTION ADOPTING THE ISAIAS TASK FORCE QUARTERLY REPORT

WHEREAS, on Tuesday, August 4, 2020, Tropical Storm Isaias landed on Long Island with rain and wind gusts of up to 70 miles per hour, resulting in damage to the electrical system and causing approximately 646,000 customer outages; and

WHEREAS, pursuant to Section 1020-f(y) of the Public Authorities Law, General Powers of the Authority, LIPA, in part, may “make any inquiry, investigation, survey or study which the authority may deem necessary to enable it effectively to carry out the provisions of this title. . .”; and

WHEREAS, pursuant to Section 4.4(16), Rights and Responsibilities of LIPA, of the Amended and Restated Operations Services Agreement, LIPA, in part, has the right to “make recommendations to the Service Provider, in each case as may be reasonably necessary or appropriate to perform LIPA’s oversight responsibilities and obligations with respect to the provision of Operations Services under this Agreement and as may otherwise be necessary or appropriate to comply with LIPA’s legal, contractual and fiduciary obligations. . .”; and

WHEREAS, on August 5, 2020, LIPA’s Chief Executive Officer initiated an independent review of the circumstances and root causes that led to the lapses in PSEG Long Island’s Tropical Storm Isaias storm restoration; and

WHEREAS, LIPA’s Chief Executive Officer appointed an Isaias Task Force (“Task Force”) that was charged with both providing actionable recommendations and overseeing PSEG Long Island’s remediation activities; and

WHEREAS, the Task Force presented the 30-Day Report to the Board at the September 23, 2020 Board Meeting and released it to the public; and

WHEREAS, on November 18, 2020, the Task Force presented the 90-Day Report, which provided recommendations to, among other things, (i) Change Management Incentives and Accountabilities; (ii) Reform Information Technology and Emergency Management; and (iii) Strengthen LIPA’s Oversight (together with the 30-Day Report recommendations, the “Task Force Recommendations”); and

WHEREAS, the Board has adopted additional recommendations since December 2020 to address management deficiencies outside the scope of the Task Force review; and

WHEREAS, the Board has requested written Quarterly Reports with a comprehensive summary of the status of the implementation of all of the Board-adopted recommendations until all such recommendations have been completed; and

WHEREAS, on June 23, 2021, the Board adopted the first Quarterly Report; and

WHEREAS, on September 22, 2021, the Board adopted the second Quarterly Report; and

WHEREAS, LIPA Staff has submitted to the Board the third Quarterly Report for the Board's approval.

NOW, THEREFORE, BE IT RESOLVED, that the Board adopts the Quarterly Report.

Dated: December 15, 2021