Status of Implementation Plans for Board Recommendations
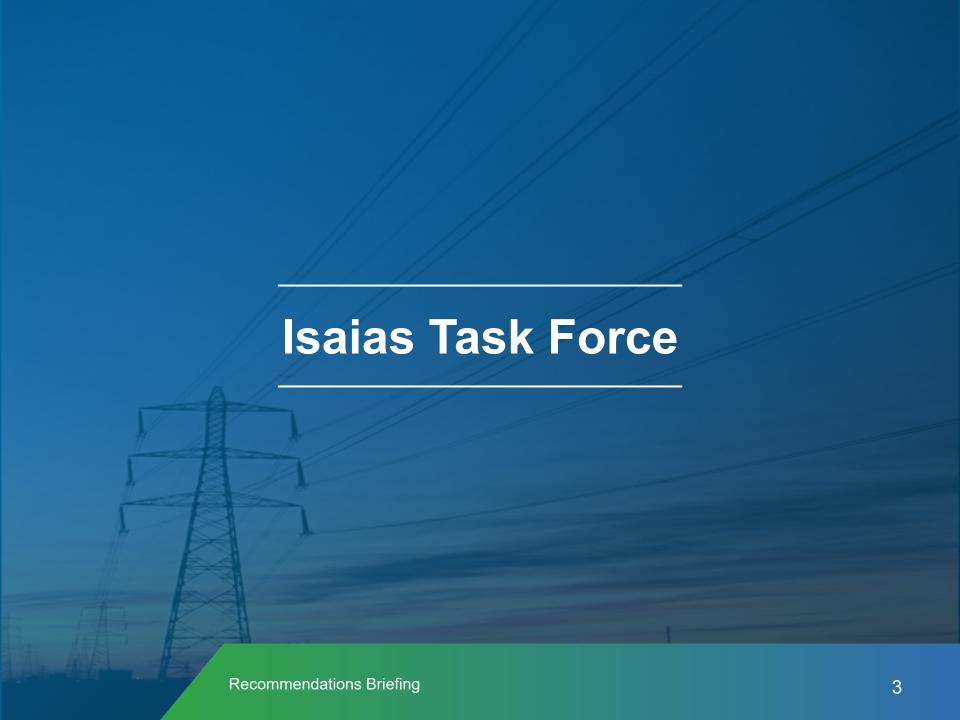
March 29, 2021

SUMMARY STATUS OF RECOMMENDATIONS

Status of Project Implementation Plans for LIPA Board Recommendations
(as of March 2021)

Findings	Adopted	Total #	Complete & Under Review	In Progress	Plans Rejected and Outstanding				Deferred	Plans Due
					Dec.	Jan.	Feb.	Mar.		
Isaias Task Force	11/18/20	80	18	35	9	1	8		9	27
Risk Management	12/16/20	8	-	8	-	-	-	-	-	-
Budgeting and Reporting	12/16/20	3	-	3	-	-	-	-	-	-
Real Estate Management	1/27/21	5	-	-	-	-	-	-	5	5
Asset Management	2/24/21	6	-	-	-	-	-	-	-	6
Inventory Management	2/24/21	25	-	-	-	-	-	-	-	25
Collections Management	2/24/21	3	-	-	-	-	-	-	-	3
Asset Management and Property Records	3/29/21	2	-	-	-	-	-	-	-	2
Affiliate Services	3/29/21	7	-	-	-	-	-	-	-	7
Total		139	18	46	9	1	8		14	75

- The Board has adopted over **139 recommendations** to improve PSEG Island management, emergency management, information technology, risk management, budgeting and reporting, real estate management, asset management, inventory controls, collections and affiliate services
- PSEG Long Island has submitted **64 implementation plans**. Some project plans address multiple recommendations
  - **18 recommendations are complete** and pending LIPA review
  - the Board has **adopted 46 implementation plans**
  - **75 plans to be considered** at the Board's April and May meetings
- The Board will receive **quarterly status updates** on the implementation of each plan, with independent verification and validation by LIPA staff

Isaias Task Force

ISAIAS TASK FORCE RECOMMENDATIONS

- LIPA received **26 Project Implementation Plans** (PIPs) in Feb/March

  - **11 proposals: Accepted**

  - **15 proposals: Rejected (Resubmit in April)**

- LIPA received **2 deliverable** for a project marked "complete" by PSEG

  - Pending independent verification and validation (IV&V) by LIPA

PROJECT IMPLEMENTATION PLAN REVIEW PROCESS

Expectations from the PIP were clearly communicated
- Recommendation text was supplemented by a description of the "expected end-state" and "key deliverables" (see Board Packet Appendix B)
- LIPA provided a structured template to PSEG Long Island
- When requested, LIPA met with the PSEG Long Island staff several times to provide explanations, assistance, and guidance on PIP requirements

Upon submission, a team of 4 experts reviewed the proposed PIPs. We looked for (a) understanding of the recommendation, (b) proposed technical approach, (c) timeliness of execution, and (d) responsiveness to prior comments

Based upon this review the PIP team recommended "accept," "accept with comments," or "reject, please resubmit"

LIPA
Long Island Power Authority

COMPREHENSIVE END-TO-END TESTING A BRIEF EXPLANATION

So far PSEG Long Island has conducted only piecewise segmented testing of their communications and Outage Management Systems

- While these tests are helpful in identifying specific failure modes they are not sufficient to assure that the system will actually work in a real-life scenario

- In the segmented testing we can only prove that certain system execution path works under very controlled conditions

- Under the comprehensive end-to-end testing protocols, PSEG Long Island will be required to demonstrate that all significant execution paths are exercised and they all function properly under a real-life scenario. It includes not only technology systems but also the people and process elements.

LIPA and PSEG Long Island has agreed that successful "comprehensive end-to-end" tests constitute minimum thresholds for demonstrating readiness of the critical systems

Telephone lines for storm reporting still need to be fully tested

- PSEG Long Island has been making changes to the system and has been conducting partial system tests

- To date, PSEG Long Island has not completed the following tests requested by LIPA, which would simulate real-life scenarios:

  - **Comprehensive end-to-end stress test** for trouble calls from customer to OMS system and to Long Island call centers (for wire-down reporting)

  - **Daytime stress tests** that simulate calls originating from LIPA territory

OMS is still failing when stress-tested under the "Isaias" scenario

- PSEG Long Island moved to an older version (v 5.5) of the OMS system after the storm. PSEG Long Island is now planning to pursue a "re-platform" strategy to return to the latest application version (v 6.7)

- LIPA is concerned that there remains considerable risk to customers that has not been mitigated. The planned May 2021 implementation date for the re-platformed v 6.7 is very close to the start of next hurricane season, and PSEG Long Island has not conclusively demonstrated that re-platforming will resolve the issues

- Lack of strong internal capability have resulted in several false starts and over-reliance on vendor solutions

CURRENT STATUS: BUSINESS CONTINUITY PLANS

Comprehensive BCP in Development and Needs to be Tested

- 90-Day Report identified the lack of comprehensive Business Continuity Plans (BCP) as contributing to the inadequate Isaias storm response by PSEG Long Island

- 90-Day Report recommended the development of comprehensive BCPs for all mission critical systems to enable graceful recovery from technology failures

- In response, PSEG Long Island submitted a "Restoration Contingency Plan for Critical System Failures" and conducted a table-top review. They subsequently released an update 2.1 responding partially to LIPA feedback. The document is a start but focuses mainly on the particular OMS failure scenarios experienced during Isaias. The document has placeholders for other "critical systems" – it remains incomplete

- PSEG Long Island still needs comprehensive BCPs for all mission critical systems and the BCP need to be exercised through real-time simulations. LIPA is continuing to meet with PSEG Long Island to ensure the expected outcomes from the recommendation

ASSET MANAGEMENT

RECOMMENDATIONS FOR ASSET MANAGEMENT

Asset Management Recommendations Adopted by LIPA Board – February 24, 2021

1. Asset Management Framework
    *   Three-year roadmap to ISO 55001 compliance – by 4/30/21

2. Reliability Assessment of Plant Asset Performance – by 9/30 of each year

3. Asset Management Plans – by June 2021

4. Computerized Maintenance Management System (CMMS)
    *   Plan that includes all assets – by August 2021
    *   Complete CMMS upgrade with 1/3 of assets by 12/31/21
    *   Audit plant records by 12/31/2021

5. Strategic Asset Management Plan (SAMP) – outline by 6/30/21

RECOMMENDATIONS FOR ASSET MANAGEMENT

Staff recommends the Board adopt the following additional recommendations related to asset management and property records due May 2021

1. Implement Enterprise Asset Management System (EAMS)
    *   Capable of accommodating all utility operational assets
    *   Comprehensive asset health monitoring and predictive maintenance capabilities
    *   Deploy Phase 1 by 12/31/2022

2. Conduct a System-wide Physical Inventory of Outside Plant Assets including condition assessment. Leverage this work to preemptively collect asset data to populate the future EAMS.

AFFILIATE SERVICE

RECOMMENDATIONS FOR AFFILIATE SERVICES

Background

- PSEG Long Island utilizes PSE&G subsidiaries as "affiliates" to provide administrative and support services such as: IT system and project support, Human Resources, Procurement, Treasury, and Legal Services

- LIPA needs increased transparency on the use of Affiliates and associated costs

- Affiliate costs include a premium due to facility, support, and administrative overhead costs being added to direct labor costs

- In 2020 LIPA paid PSE&G affiliates $23 million for affiliate services. This includes affiliate costs for the processing of Tropical Storm Isaias food and medicine spoilage claims and for handling overflow customer calls and other support during Tropical Storm Isaias

- $17 million, or 75 percent of the 2020 affiliate costs were for cost allocated based on a formula, resulting in no transparency and accounting detail

RECOMMENDATIONS FOR AFFILIATE SERVICES

Staff recommends the Board adopt the following recommendations related to affiliate services and transfer of ServCo employees to other PSEG business units:

1. Cost Benefit Justification of Affiliate Services
   - Explain why the service is better performed as an Affiliate Service and not performed by PSEG Long Island ServCo employees who are directly paid for by LIPA
2. Shift indirect charges (through formulaic allocations) to fully transparent direct charges
3. Improve budget documentation of IT-related Affiliate Services
   - Budget plan should better document specific IT related projects supported by Affiliate services
4. Expose calculation of hourly billing rates in the budget plan
5. Provide quarterly budget variance reports on Affiliate Services
6. Justify Affiliate Charges by people dedicated full-time to Long Island services
7. Require prior approval from LIPA when Servco people are hired away by other PSEG business units (current OSA requirement)