



Status of Implementation Plans for Board Recommendations

May 19, 2021

SUMMARY STATUS OF RECOMMENDATIONS

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

Findings	Adopted	Total #	Complete & Under Review	In Progress	Plans Rejected and Outstanding					Plans Due
					Dec.	Jan.	Feb.	May	Deferred	
Isaias Task Force	11/18/20	80	18	37	9	1	6	-	9	25
Risk Management	12/16/20	8	-	8	-	-	-	-	-	-
Operating Budget	12/16/20	3	-	3	-	-	-	-	-	-
Real Estate Management	1/27/21	5	-	5	-	-	-	-	-	-
Inventory Management	2/24/21	25	-	18	-	-	-	6	-	7
Collections Management	2/24/21	3	-	3	-	-	-	-	-	-
Asset Management	3/29/21	7	-	5	-	-	-	2	-	2
Affiliate Services	3/29/21	3	-	1	-	-	-	2	-	2
Strategic Planning	4/28/21	3	-	-	-	-	-	-	-	3
IT System Modernization	4/28/21	2	-	-	-	-	-	-	-	2
Capital Budget	5/19/21	3	-	-	-	-	-	-	-	3
Total		142	18	80	9	1	6	10	9	44

The Board has directed PSEG Long Island management to implement **142 recommendations** to improve PSEG Long Island operations

- **18 recommendations are complete** and pending LIPA review
- The Board has **adopted 80 PSEG Long Island implementation plans**
- **16 recommendations** have been **rejected and not resubmitted**
- **44 PSEG Long Island plans to be considered** at the Board's June meeting

The Board will receive **quarterly status updates** on the implementation of each plan, with independent review and validation by LIPA staff



Quarterly Reporting

BACKGROUND ON ITF REPORTS

- The Isaias Task Force (ITF) was established to undertake a thorough and independent analysis of the **root causes** underlying PSEG Long Island's inadequate response to Tropical Storm Isaias
- ITF produced a 30-Day Report concluding that the **proximal causes of PSEG Long Island's failed response were a series of technical failures**. The 30-Day Report proposed immediately actionable technical recommendations for implementation by PSEG Long Island
- The ITF 90-Day Report addressed broader questions on the **effectiveness of PSEG Long Island's management of utility operations**. The 90-Day Report provided nearly 100 recommendations for the Board's adoption
- A final report from the ITF envisioned a closure to the ITF technical and management issues within 6 months. Delays by PSEG Long Island in submitting adequate Project Implementation Plans (PIPs) and in implementing acceptable remediations of the IT systems has **delayed the ITF's plans for a Final Report**

ITF QUARTERLY REPORT

- LIPA Staff is requesting that in place of a Final Report, the Task Force instead provide a **series of quarterly reports** with additional findings, if any, and a comprehensive summary of the status of the implementation of Board-adopted recommendations
- The first such quarterly report shall be provided at the **Board's June 2021 meeting** and will continue until all Board-adopted recommendations have been implemented
- The Board will also continue to receive **updates at each meeting** on the status of PIPs for Board-adopted recommendations and on the implementation of IT remediations



Isaias Task Force Recommendations

ISAIAS TASK FORCE RECOMMENDATIONS

- **PSEG Long Island did not submit any ITF related PIPs** in May
- ITF PIPs still outstanding
 - PSEG Long Island has yet to submit **one Tier 2 PIP**
 - PSEG Long Island **has not submitted** revised PIPs for **15 recommendations** the Board has previously considered and provided comments on at the December, January, and February meetings

SOME HIGH-LEVEL OBSERVATIONS ON IT REMEDIATION PROCESSES

PSEG Long Island still does not have a fully tested telecommunications and OMS system in place. Nor do they have the required set of Business Continuity Plans that have been tested and validated

- Internal PSEG Long Island technical team continues to lack key skill sets
 - Vendor management problems continue – PSEG Long Island has not demonstrated top-level internal technical leadership – it seems that the consultants are the key technical decision-makers
 - Project management by PSEG Long Island continues to be weak – no target dates for closure
- PSEG Long Island has been reluctant to accept the technical recommendations of LIPA's ITF and consultants – however, they eventually come to the same conclusion. For example:
 - Hardware upgrades
 - Deduplication of inbound messages
- PSEG Long Island is currently spending \$3 million per month on consultants and repairs – which is a large amount to spend to fix these issues

CURRENT STATUS: COMPREHENSIVE END-TO-END TESTING OF OMS 5.5

- PSEG Long Island was aiming for a full-fledged, comprehensive end-to-end test of **all OMS and telephone components**, including downstream and feeder systems
- PSEG Long Island defined its success criteria at “**no more than 4% failure rate**” per channel
 - The system did not meet the success criteria on **mobile channels** and **Incident Manager** but performed satisfactorily on other channels
 - The **Interactive Voice Response** error rate also exceeded the threshold during the first hour of the test but recovered later
 - The **MyAccount** Store Mode Outage Report failure rate exceeded the threshold during the first two hours of the test.
 - Noticeable **slowness** was observed in the **OMS incident manager** and **outage map** updates
- Based on the test scenarios presented it would take in **excess of 12 hours** for an outage reported via one of the channels to be entered into the OMS. This is clearly not an acceptable user experience
- LIPA will discuss service levels with PSEG Long Island to produce a **reasonable time period acceptable for customer outage reports** to be registered into the system and acted upon

CURRENT STATUS: COMPREHENSIVE END-TO-END TESTING OF OMS 5.5 (CON'T)

- LIPA representatives (virtually) observed the comprehensive test. PSEG Long Island has submitted its report on the test results
 - PSEG Long Island's presentation of results in the aggregate does not include the various failures which LIPA representatives observed and recorded during the test
 - **LIPA disagrees with PSEG Long Island's categorization of the tests as successful** and would ask PSEG Long Island to conduct another test with better preparation where the test's failure rate remains below the threshold throughout the testing period
- Once PSEG Long Island can successfully demonstrate that all test elements have reproducibly met their success criteria then we expect PSEG Long Island to certify their results
 - LIPA will then conduct its **Independent Verification and Validation Review (IV&V)** and report the findings to the Board
 - To date, PSEG Long Island has not completed the "Daytime Stress Test," requested by LIPA, which would simulate real-life scenarios: calls originating from Long Island during regular business hours

CURRENT STATUS: OUTAGE MANAGEMENT SYSTEM 6.7

Outage Management System v6.7 is Still Not Fixed:

- PSEG Long Island moved to an older version (v 5.5) of the OMS system after the storm. OMS v 5.5 is no longer vendor supported and has more limited capabilities than v 6.7, including lack of smart meter integration and mobile applications for damage assessment
- PSEG Long Island is pursuing a “re-platform” strategy to return to the latest OMS application version v 6.7
- LIPA is concerned that there remains considerable risk to customers that has not been mitigated
 - PSEG Long Island is now proposing that they will not implement v 6.7 until after the coming storm season
 - **PSEG Long Island has not provided any fixed dates when the system will be fixed**

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 (BCPs) and recommended the development of comprehensive BCPs for all mission-critical systems to enable graceful recovery from technology failures
- PSEG Long Island submitted a “Restoration Contingency Plan for Critical System Failures” and updates thereof. LIPA has provided feedback/comments to PSEG Long Island, but they have not been completely incorporated. **PSEG Long Island has not provided revisions to their current document**
- PSEG Long Island has published a draft document on a Crisis Management Team. LIPA provided feedback on this document. To date, **PSEG Long Island has not addressed LIPA’s concerns** and has not released a revised version to LIPA
- PSEG Long Island conducted a tabletop drill of its OMS BCP in February and attempted a “functional exercise” in April. The functional exercise was informative but fell short of expectations of a true functional exercise. **LIPA recommends that PSEG Long Island repeat its “functional exercise” with greater rigor and then develop a true “full-scale” exercise of its BCPs**
- PSEG Long Island has submitted to LIPA 52 Tier-1 BCP “work-around” plans intended to document contingency procedures in case of failure of specific IT systems. These documents are at an early stage of development, and LIPA continues to provide feedback to PSEG Long Island on these plans

TRUSTEE COHEN'S QUESTION REGARDING MITIGATION COSTS

- Per Trustee Cohen's request, we have requested monthly report(s) on all external or third-party costs incurred by PSEG Long Island to remediate or attempt to remediate Long Island telephone and Outage management systems (including feeder systems such as ESB, pCAD, Intrado, DSCADA, Kubra, Mobile, Web, CAS, etc.) and to prepare Business Continuity Plans related to TS Isaias as well as an estimate of the cost to completion
- Trustee Cohen also requested that LIPA report its own external cost (e.g. consultant fees) to date expended on oversight of PSEG Long Island's remediation of failed IT systems

PSEG LONG ISLAND'S RESPONSE TO TRUSTEE COHEN'S REQUEST

PSEG LONG ISLAND EXPENDITURES (O&M + CAPITAL)

AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL
\$998	\$142,289	\$699,099	\$153,313	\$913,032	\$1,178,198	\$3,171,300	\$3,447,246	<u>\$9,705,475</u>

LIPA EXPENDITURES

AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL
\$40,150	\$345,253	\$277,376	\$134,610	\$150,930	\$183,407	\$152,861	\$179,612	\$1,464,201

EXTRAPOLATING FROM THESE NUMBERS,
PROJECTED COSTS COULD BE AROUND \$20 to \$30 MILLION



Affiliate Services

RECOMMENDATIONS FOR AFFILIATE SERVICES

PSEG Long Island utilizes PSEG subsidiaries as “affiliates” to provide administrative and support services such as: IT system and project support, Human Resources, Procurement, Treasury, and Legal Services. LIPA staff identified gaps in transparency, accountability, and justification of cost structure

At its March meeting, 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
 - Cost Benefit Justification of Affiliate Services
 - Shift indirect charges (through formulaic allocations) to fully transparent direct charges
 - Improve budget documentation of IT-related Affiliate Services
 - Provide calculation of hourly billing rates in the budget plan
2. Enhanced Affiliate Actual Cost Transparency
 - Provide quarterly budget variance reports on Affiliate Services
 - Justify Affiliate Charges by people dedicated full-time to Long Island services
3. Former ServCo Employees
 - Require approval from LIPA when Servco people are hired away by other PSEG business units (current OSA requirement)

RECOMMENDATIONS FOR AFFILIATE SERVICES (CON'T)

- During May 2021, PSEG Long Island submitted 3 Project Implementation Plans that collectively addressed the Board recommendations on Affiliate Services
- LIPA Staff evaluated the submitted PIPs and recommends that the Board approve 1 PIP, which addresses the Recommendation requiring prior approval from LIPA when ServCo people are hired away
- The other submitted PIPs do not conform to the implementation timeline desired by LIPA and remain inconsistent in a few other implementation expectations. LIPA staff will engage PSEG Long Island in further discussions with the aim of obtaining a revised submission from PSEG Long Island in time for the Board's June meeting



Capital Budgeting Improvements

RECOMMENDATIONS FOR CAPITAL BUDGETING IMPROVEMENTS

- While LIPA and PSEG Long Island are making improvements to the Operating Budget process to address the prior recommendations adopted by the Board, PSEG Long Island's Capital Budgeting processes have similar issues
- LIPA is proposing that the Board adopt the following three recommendations to improve the Capital Budgeting planning/execution at PSEG Long Island:
 1. Capital Project & Budget Review and Approval process
 - For each new capital project in the Board-adopted consolidated budget, PSEG Long Island should develop a Project Justification Descriptions (PJD) following LIPA guidelines
 - For an existing project which will have material changes in scope or cost, PSEG Long Island should submit amended PJDs for such changes
 - For new projects emerging during the year, PJDs should be submitted
 2. Capital Budget Changes and Reallocations
 - Annual updates for changes to PJDs will be submitted
 - PSEG Long Island should provide explanations to capital budget reallocation requests when they are made
 3. Capital Budget Carryover
 - Carryover of capital project funds from one period to another must be documented and submitted to LIPA



Collections Management

RECOMMENDATIONS FOR COLLECTIONS MANAGEMENT

LIPA has expressed its continuing concern over the performance of PSEG Long Island's Damage Tracking System (DTS) for non-product billing and collections process

On February 24, 2021, the Board adopted the following recommendations on PSEG Long Island's non-product billing and collections:

1. Provide a PIP to materially improve the DTS billing and collections process
2. Provide access to the DebtNext platform to one (1) LIPA user, who should be able to view transactions and run all reports
3. Provide a PIP to improve the billing and collections process for miscellaneous non-utility billings

On March 26, 2021, PSEG Long Island submitted to LIPA their proposed PIPs for the Collections Recommendations

Based on LIPA comments the plans were resubmitted and are now consistent with expectations. LIPA Staff recommends that the Board adopt the Implementation Plan



Asset Management

RECOMMENDATIONS FOR ASSET MANAGEMENT

On March 29, LIPA Board adopted 7 Asset Management Recommendations for implementation by PSEG Long Island:

1. Adopt the ISO Asset Management Framework and develop a 3-year roadmap to ISO 55001 compliance
2. Conduct Annual Reliability Assessment of Plant Asset Performance – by 9/30 of each year
3. Develop Comprehensive Asset Management Plans – by June 2021
4. Capture Additional Data into the Computerized Maintenance Management System (CMMS)
5. Strategic Asset Management Plan (SAMP) – outline by 6/30/21
6. Implement Enterprise Asset Management System (EAMS) - deploy Phase 1 by 12/31/2022
7. 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

RECOMMENDATIONS FOR ASSET MANAGEMENT

- During April and May, PSEG Long Island submitted one consolidated PIP addressing 5 of the 7 recommendations
- The consolidated PIP (AM-01) indicated that a comprehensive PIP for recommendation 6 will be submitted as a separate PIP after consultant review
- Recommendation 7 was not addressed, and LIPA has indicated to PSEG Long Island that it expects a separate PIP for this recommendation
- Staff recommends the Board adopt the PIPs for addressing the Board Asset Management Recommendations 1 through 5
- The PIP for Recommendation 6 (Implement an Enterprise Asset Management System) shall be submitted by PSEG Long Island for LIPA Staff review no later than August 31, 2021, for consideration at the Board's September meeting
- We also expect PSEG Long Island to submit a PIP addressing Recommendation 7 (Systemwide Physical Inventory of Outside Plant Assets) for LIPA staff review no later than May 31, 2021, for consideration at the June meeting



Inventory Management

INVENTORY MANAGEMENT RECOMMENDATIONS

On February 24, 2021, Board adopted 25 recommendations to address deficiencies in inventory management controls and practices: technology, warehouse management, and procurement and directed PSEG Long Island to develop and submit PIPs by April 9, 2021

- PSEG Long Island submitted 23 PIPs in April; LIPA Board approved 15 PIPs and recommended that the remaining 10 proposals be resubmitted for consideration at the May Board meeting
- In May, PSEG Long Island submitted 3 PIPs addressing 4 recommendations; LIPA staff is recommending approval of 2 PIPs and the third PIP be resubmitted in June
- PSEG Long Island has indicated that the other 6 PIPs will be addressed as part of the long-term SAP upgrade plan, which may take 3 years to deliver
- LIPA has rejected this approach and is urging PSEG Long Island consider alternative technical approaches to satisfy these requirements in the near term; staff is recommending that the Board reject this approach and ask PSEG Long Island to develop responsive PIPs and resubmit at the June Board meeting



Real Estate and Facility Assets Management

REAL ESTATE AND FACILITY ASSETS

PSEG Long Island is responsible for the management of real estate, easements, leases and agreements, pole attachments, etc., as well as running revenue operations related to joint-use assets

The LIPA Board wanted to ensure that our real estate management direction was driven by a sound strategic approach that considers the cost and modernization of the facilities. The Board on January 27, 2021 adopted the following five recommendations:

- Develop a long-term strategy for LIPA's real estate and facility assets
- Develop a comprehensive strategy for the development of a new Primary Transmission Control Center and an Alternate Control Center
- Develop a joint strategy with National Grid for separation of existing operations centers
- Hire an outside consultant to perform a comprehensive review of the existing real property records to confirm accuracy, identify gaps, and make recommendations or process improvements
- Develop a succession plan for current long-serving PSEG Long Island real estate professionals to ensure knowledge capture and transfer

REAL ESTATE AND FACILITY ASSETS

- In response, PSEG Long Island submitted 5 PIPs on February 4, 2021. On February 24, 2021, the Board rejected the PIPs and directed PSEG Long Island to revise them consistent with LIPA staff comments
- Based on LIPA staff comments, PSEG Long Island has submitted PIPs that address the Board's Recommendations
- LIPA staff is recommending that the Board approve all 5 Real Estate and Facility Assets PIPs submitted by PSEG Long Island