

FOR CONSIDERATION

February 24, 2021

TO: The Board of Trustees

FROM: Thomas Falcone

SUBJECT: Consideration of the Adoption of Recommendations to Improve Inventory Management

Requested Action

The Board of Trustees (the “Board”) of the Long Island Power Authority (“LIPA”) is requested to adopt a resolution approving certain recommendations to improve PSEG Long Island’s inventory management practices (the “Inventory Management Recommendations”), which resolution is attached hereto as **Exhibit “A”**.

Background

PSEG Long Island is responsible for “Inventory Control” including (a) maintaining an inventory of equipment, spare parts, materials and supplies and maintaining and documenting an inventory control program; (b) complying with the inventory policy provided in the Operations Manual; (c) purchasing, maintaining and storing inventory in a manner consistent with the System Policies and Procedures; and (d) completing, on an agreed-upon cycle count basis, a physical inventory of the equipment, spare parts, materials and supplies and reconciling the same with the inventory assets carried on the balance sheet and providing the information to LIPA.

In December 2017, LIPA engaged Ernst & Young, LLP (“EY”) to perform a review of inventory controls during storm events. The review included:

- Evaluation of existing policies, procedures, and guidelines in place for the request and issuance of materials/equipment from storerooms under conditions of high activity (e.g., storms).
- Understanding the systems or tools utilized in the process including tracking, approving and/or reporting mechanisms used for materials/equipment distribution.
- Assessing the return of materials/equipment to storerooms after the storm event including, but not limited to: monitoring processes over the expected return of materials and KPI’s in place, effectiveness of policies and procedures, and cost recording/record-keeping implications if unused materials/equipment are not returned, but then used in a non-storm event.

EY presented 11 findings with 14 recommendations. PSEG Long Island addressed each of the recommendations through policy and procedure changes.

In 2020, LIPA engaged PA Consulting to confirm that the EY recommendations had been implemented and to conduct a broader assessment of PSEG Long Island’s inventory management practices. The PA Consulting assessment included a review of the efficiency and effectiveness of warehouse and inventory management practices, how the practices benchmark against industry standards, and where there are opportunities to improve performance. The assessment was conducted

from November 2020 through January 2021, and included evaluating current inventory operations and processes, identifying current state gaps, assessing readiness of storm response, and developing recommendations for next steps. During the course of the assessment, PA Consulting interviewed 27 PSEG Long Island personnel and observed activities and reviewed documents at two locations.

PA Consulting confirmed that the EY recommendations had all been implemented but reported 25 additional findings (collectively, the Inventory Management Recommendations) among the areas of general management, information technology, warehouse management, inventory management, and procurement practices. Based on these findings, PA Consulting promulgated over 50 remediations. The findings and remediations are summarized in Exhibit B.

PSEG Long Island should prepare Implementation Plans for each of the 25 Inventory Management Recommendations no later than April 9, 2021. The Implementation Plans will be presented to the Board for consideration at its May 2021 meeting.

Recommendation

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

Attachments

<u>Exhibit “A”</u>	Resolution
<u>Exhibit “B”</u>	Summary of Findings and Remediations

RESOLUTION ADOPTING RECOMMENDATIONS RELATING TO INVENTORY MANAGEMENT

WHEREAS, pursuant to Section 4.4(16) of the Amended and Restated Operations Services Agreement (“OSA”), LIPA 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, additionally, the OSA provides that PSEG Long Island is responsible for “Inventory Control” and shall maintain an inventory of equipment, spare parts, materials and supplies and shall maintain and document an inventory control program; (b) comply with the inventory policy provided in the Operations Manual; (c) purchase, maintain and store inventory in a manner also consistent with the System Policies and Procedures; and (d) complete, on an agreed-upon cycle count basis, a physical inventory of the equipment, spare parts, materials and supplies and reconcile the same with the inventory assets carried on the balance sheet and provide the information to LIPA

WHEREAS, each of the Inventory Management Recommendations will address deficiencies in inventory management practices and material stocking levels. This will ensure appropriate levels of inventory to respond to routine workloads and adequate material inventory during emergency response restoration efforts, while providing the highest value to our customers; and

NOW, THEREFORE, BE IT RESOLVED, the Board hereby adopts the Inventory Management Recommendations; and

BE IT FURTHER RESOLVED, that the Board hereby directs LIPA Staff, together with PSEG Long Island, to implement the Inventory Management Recommendations, including the creation of Implementation Plans by April 9, 2021 for the Board’s consideration at its May 2021 meeting; and

BE IT FURTHER RESOLVED, that the Board directs LIPA Staff, together with PSEG Long Island, to report to the Board on the completion of the Inventory Management Implementation Plans no less than a quarterly until they are completed.

Dated: February 24, 2021

Summary of Findings

Twenty-five (25) findings are located in this evaluation, ranging from low, medium, high, and very high in relation to their impact to the business and complexity of implementation.

		Impact to Business			
		Low	Medium	High	Very High
Implementation Complexity	Low	<ul style="list-style-type: none"> WM4 – Quality hold and returns WM5 – SAP Bin locations WM6 – Crew inventory errors 	<ul style="list-style-type: none"> WM3 – Signage IM5 – Demand forecast 		
	Medium	<ul style="list-style-type: none"> IM10 – Stock rotation SP2 – EDI / VMI 	<ul style="list-style-type: none"> GMIT3 – Reporting GMIT4 – Training IM6 – Inventory policies IM7 – Stocking levels IM9 – Inventory policy reviews IM11 – PPE, consumables, tools 	<ul style="list-style-type: none"> WM1 – Bar coding WM2 – Exception reporting IM2 – Executive meetings IM3 – Inventory metrics IM4 – Work orders IM8 – Storm clauses SP1 – Vendor storm clauses 	<ul style="list-style-type: none"> GMIT2 – Supply chain communication GMIT6 – IT fail over plan IM1 – Storm Inventory Strategy
	High				<ul style="list-style-type: none"> GMIT1 – SAP systems

* One finding was left out of this matrix, as its impact to business and implementation complexity is unknown.

General Management & IT

Rating	Summary Finding	Finding Detail	Remediation
<div>Impact to Business</div> <div>H Implementation Complexity</div>	GMIT1 – SAP system is not innovating with the business	<ul style="list-style-type: none"> Current SAP system is R/3 and was implemented in 9-months. PSEGLI must upgrade to SAP version S/4 by 2027. The replacement schedule for the current R/3 instance is unknown. PSEGLI is only updating SAP with security patches. No functionality related patches are being executed. No new functionality enhancements have been implemented by PSEGLI to improve forecasting, warehousing, or inventory management over the last 3 years. PSEGLI has been unable to provide a systems overview or related high-level functional or technical specifications. These documents should be readily available. Inability to quickly supply these documents highlights a risk that the system may not be sufficiently documented, which may in part drive hesitancy to make changes. 	<ul style="list-style-type: none"> PSEGLI must provide the sunset schedule for the R/3 instance. PSEGLI and LIPA must formulate a plan such that PSEGLI can demonstrate an ability to innovate and improve system functionality inclusive of needed future business requirements and budget. Formalizing this plan for innovation can be accomplished within the service contract between PSEGLI and LIPA, whereby a defined number of IT innovation hours or SAP Reports, Interfaces, Conversions, Enhancements, Forms ("RICEFs") are allocated specifically to the PSEGLI operation.
<div>Impact to Business</div> <div>M Implementation Complexity</div>	GMIT2 - Lack of Visibility & Formalized Communication between LIPA and PSEGLI inventory management can create a lack of trust	<ul style="list-style-type: none"> PSEGLI runs reports on an as needed basis or at unknown frequencies. In some cases, key metrics are not available. PSEGLI has no provided visibility and understanding to LIPA in some instances due to obscured / unavailable information from reporting. 	<ul style="list-style-type: none"> Create a standard reporting pack to share with LIPA's inventory management oversight on a weekly, monthly, quarterly basis. Host a weekly, monthly, or quarterly meeting with LIPA driven from standard reporting, goals, and metrics. Meetings should track progress to quantified goals. Non-fact-based assessments should be kept to a minimum within the meeting.
<div>M Impact to Business</div> <div>M Implementation Complexity</div>	GMIT3 – Lack of standard reporting functionality	<ul style="list-style-type: none"> It is unclear which PSEGLI reports are repeatable / system generated versus excel downloads with longer lead times requiring manual manipulation, which may risk producing varying results. PSEGLI's inventory management personnel do not have training to create repeatable reports through the SAP – Business Warehouse ("BW"). 	<ul style="list-style-type: none"> Construct a list of existing reports / metrics versus needed reports / metrics. Prioritize and create reports as needed via IT support in SAP-ERP or end user self-service creation through SAP – BW.

General Management & IT

Rating	Summary Finding	Finding Detail	Remediation
<div>M</div> Impact to Business <div>M</div> Implementation Complexity	GMIT4 – Opportunities to improve and formalize training	<ul style="list-style-type: none"> PSEGLI operations team wrote the training that is utilized for SAP PSEGLI has constructed training associated with business process flows and SAP transactional guidance for clerks and operational personnel. Future plans call for retraining on an annual basis. There is no training for bar coding or superusers. Inventory control and quality hold are lacking depth and detail within training. 	<ul style="list-style-type: none"> Formally send LIPA the completed training plan with completion details and planned retraining dates for personnel on a quarterly or annual basis. While training exists for BEX based AA exception reports. The training lacks guidance for how to clear out specific transactions and implications once transactions are unblocked in the system. Training must be reviewed and updated for quality hold, inventory control, and bar coding.
Unknown – Cannot assess	GMIT5- Ability to support high volume of transactions during a storm or mass system failure	<ul style="list-style-type: none"> PSEGLI IT does not do routine stress testing. They have stated they closely monitor performance and have plenty of capacity. A systems stress test document has not been received from PSEG. 	<ul style="list-style-type: none"> PSEGLI must perform a formal stress test on the system and provide the results to LIPA for review.
<div></div> Impact to Business <div>M</div> Implementation Complexity	GMIT6-Confirm detailed business continuity plan and fail-over preparations	<ul style="list-style-type: none"> PSEGLI T&D has created a Business Continuity Plan (BCP) which was updated/approved in September of 2020. PSEG-IT maintains a fail-over plan. Workaround procedures in the BCP call for using paper-based forms and inputting information into SAP at a later date Return to normal procedures in the BCP provides a 5-step checklist There are no backup generators at the service centers to restore power. 	<ul style="list-style-type: none"> Update workaround procedures to provide greater detail when using a hybrid onsite/work from home model i.e. having some employee working from home entering in data into SAP while other employees are onsite. Additional detail is needed to determine workaround procedures for inventory control and procurement. The BCP must be integrated with the IT fail over plan to understand the risk of data being lost if some or all systems go down. If data is lost or unrecoverable, what steps and what is the timing for manual recovery. Confirm integration of the T&D BCP to other BCP plans and alignment with broader governance. Determine workarounds at key service centers like Hicksville by acquiring a generator and utilizing mobile hotspot or similar to provide IT connectivity.

Warehouse Management

Summary

Rating	Finding	Finding Detail	Remediation
<div>H</div> Impact to Business <div>M</div> Implementation Complexity	WM1 -Bar coding technology is not utilized in material handling	<ul style="list-style-type: none"> Hicksville has bar coding guns, but they are not used due to IT constraints. Manual SAP printed transfer orders ("TO") are used to move materials. Clerks hand-write part numbers on inventory / boxes received. PSEGLI has indicated that basic TO's take ~5+ minutes to process using bar code technology. <i>Note that TO's typically process in 3-10 seconds within other SAP installations</i> Manually moving material causes keystroke errors, time lapses material availability / positioning, and difficulty when scaling to meet high intensity operations 	<ul style="list-style-type: none"> Implement bar coding enabled: inventory labelling, receiving, quality hold, transfer order, and ship transactions across all locations. Include bar coding capability on current roadmap.
<div>H</div> Impact to Business <div>M</div> Implementation Complexity	WM2 -Exception Reporting	<ul style="list-style-type: none"> Exception reports locate transactions that are in error with associated inventory which cannot move to the next step. Many times these exceptions are not located using standard SAP reports. There are approximately 1,000-2,000 exception records today in SAP. PSEGLI implemented a number of exception reports in September of '20. Based on PA experience, Exception transactions are driving 5-10% negative impact on Inventory Reliability Accuracy (IRA) %. 	<ul style="list-style-type: none"> Review exception reports with LIPA. Confirm with PSEG IT that all potential exceptions have been trapped via reports Set a formalized goal to bring exception transactions to 0 and report progress to LIPA oversight. Set formalized roles and responsibilities to execute ongoing exception remediation moving forward.
<div>M</div> Impact to Business <div>L</div> Implementation Complexity	WM3 - Lack of formal location signage at service centers	<ul style="list-style-type: none"> Hicksville indoor has acceptable location signage. Hicksville outdoor signage is informal, handwritten, or non-existent. Hicksville does not have a formal return location. 	<ul style="list-style-type: none"> Find and implement a formalized bar code enabled outdoor signage solution for all service centers. Verify that all indoor locations have an appropriate bar code enabled signage. Communicate signage progress with LIPA along with an SAP-Bin to physical location audit report.
<div>L</div> Impact to Business <div>L</div> Implementation Complexity	WM4- Formalize quality hold and returns locations are present	<ul style="list-style-type: none"> Hicksville uses a cone to physically denote quality hold location. Physical / SAP Bin return locations do not exist. SAP Bin – quality hold locations do not exist. 	<ul style="list-style-type: none"> Install signage that directs employees to warehouse employee who handles returns. Confirm SAP Bins in place for quality hold and return locations. For quality hold, confirm how SAP is configured within Inventory Management ("IM") to support quality hold items.
<div>L</div> Impact to Business <div>L</div> Implementation Complexity	WM5 - Create Bin location in SAP is not restricted	<ul style="list-style-type: none"> To prevent circumventing system and process design, bin creation should be limited to 1-2 people throughout the operation. 	<ul style="list-style-type: none"> Limit access to Bin creation / deletion functionality to 1-2 supervisors.

Warehouse Management

Rating	Summary Finding	Finding Detail	Remediation
<div>L</div> Impact to Business <div>L</div> Implementation Complexity	WM6 - Risk of crew-based pilferage, mis-use, mis-picked inventory in a self-serve environment	<ul style="list-style-type: none"> 2018 and 2020 write downs were 1.5% and 1.3% as a percentage of inventory value, which is median performance for 2020. However, 2019 saw a jump to 2.9% in write downs. The spike in 2019 write-offs were considered to be a one-time occurrence, however further explanation was not supplied by PSEG. Like all utility T&D operations, there is a risk of crews coming into an open yard and obtaining or moving inventory in error or in an attempt to mis-use it. 	<ul style="list-style-type: none"> Continue to provide information regarding write downs at a summary level as well as for specific service centers or part numbers that are underperforming at a detailed drill down level on a quarterly basis for LIPA oversight. Supply specific details of inventory written off in 2019 and the associated reasoning. For service centers with low IRA% and / or high write downs, inform union personnel of performance, and conduct remedial training for crews based out of associated service centers.

Inventory Management

Rating	Summary Finding	Finding Detail	Remediation
<div>Impact to Business</div> <div>M Implementation Complexity</div>	IM1 –Formalize and communicate Storm Inventory Strategy	<ul style="list-style-type: none"> Inventory managers maintain a 'Storm Target Material Listing' analysis which designates stocking levels for ~150 of ~7,000-part numbers. Emergency stock availability ranges from 13% to 2,440% per associated part number Emergency stock availability does not include stock held by vendors through "storm clauses" The methodology and documentation for setting and approving Emergency / Storm based stocking levels has not been communicated to LIPA. 	<ul style="list-style-type: none"> Provide visibility of the 'Storm Target Material Listing' during the D&OP meeting. The inventory management team in conjunction with the D&OP leadership team must decide on the associated supply risk versus inventory working capital expense associated with storm targets. Provide detailed methodology and process of how emergency stocking targets were created. This should include a perspective on technology, wire miles, and storm hardening efforts have changed the T&D landscape. Engineering and meteorology need to provide transparency on assessments of potential impacts of major storms on the existing infrastructure.
<div>H Impact to Business</div> <div>M Implementation Complexity</div>	IM2 -Accountable parties at an executive level do not meet in a formal and routine manner to agree upon the inventory strategy	<ul style="list-style-type: none"> Formalized forecast with sign off by accountable executives is not present. 	<ul style="list-style-type: none"> Hold a routine Demand & Operations Planning ("D&OP") meeting on a monthly or quarterly basis addressing all regions. Typically, the D&OP meeting will be 1-2 hours depending on complexity of risks and issues to be addressed. Inventory management must be the host and provide materials for the meeting. The meeting should be forward-looking of demand at a minimum of N+2 to 12 months in advance. Immediate expediting of material in the current or N+1 month should be addressed within another forum. Meeting attendees should include the accountable executives in charge of the following areas: Engineering, Finance, T&D Projects / Construction, Inventory Management, Maintenance Crews, Risk and LIPA oversight. Meeting size should be kept to a minimum and include Directors or above only. Fundamentally, the team should align on matching demand for inventory versus supply. In addition to this, executives will be monitoring inventory peak / trough planning for storm season, supply risk, working capital, and clarifying demand signals. The meeting must be run based on data and include the metric goal, current periods performance, and prior year performance. The following metrics will be reviewed: Inventory Turns, Forecast % Accuracy, # of Stockouts, Fill Rate %, and # of Backorder The output of the meeting will be an agreed upon forecast.

Inventory Management

Summary

Rating	Finding	Finding Details	Remediation
<div>H</div> Impact to Business <div>M</div> Implementation Complexity	IM3 –Some portion of fundamental inventory metrics to control the business are not available	<ul style="list-style-type: none"> The following metrics, reports, and related history are unavailable: <ul style="list-style-type: none"> # of Stockouts by part number Backorder report by part number with aging i.e. (0-15/30/60/90+ days) Service level % for known inventory specified on a work order or additional demand not previously forecasted on a work order Forecast Accuracy % Days of Supply Lack of the above metrics and history prevents the “Evaluation of Inventory Management Practices” project and ongoing oversight from assessing the performance of PSEGLI’s inventory management performance during storm / non-storm operations. 	<ul style="list-style-type: none"> In order to show full remediation, these reports and metrics must be available via the “touch of the button” with agreed upon targets and up-to-date performance on a daily / weekly / monthly basis. One off download of data with manual intervention to create information would not demonstrate remediation.
<div>H</div> Impact to Business <div>M</div> Implementation Complexity	IM4 -Workorder Demand, Requisitions and Maintenance BOMs for material order is considered to be inaccurate by PSEG personnel, which leads to overly manual intervention	<ul style="list-style-type: none"> PSEG inventory managers do not “trust” the system and accompanying work order demand and maintenance BOMs (COEs). As such, 0% of planned orders are automatically released to procurement. The significance is that inventory managers are working harder than they should. In times of a storm, scaling the current process could prove to be difficult. Additionally, this behavior is indicative of circumventing the system rather than confronting root causes of the problem which is getting demand more accurate. 	<ul style="list-style-type: none"> Set a near terms target to have ~20% of planned orders move through the system automatically. Formally, charter a project to find the causality and put controls in place to: <ul style="list-style-type: none"> Find the personnel / drivers of false demand and educate / hold accountable as needed Have a formalized plan to review maintenance BOMs and level of completion by engineering Confirm that engineering cannot create a PR without an associated work order.

Inventory Management

Rating	Summary Finding	Finding Detail	Remediation
<div>M</div> Impact to Business <div>L</div> Implementation Complexity	IM5 -Demand Forecast is not consolidated and reviewable in a drill down manner	<ul style="list-style-type: none"> Demand Forecast is not available for reporting or drill down outside of SAP or with external parties. 	<ul style="list-style-type: none"> Enable the print out / drill down of the forecast via excel to perform analytics and give greater visibility to personnel outside of the inventory control group.
<div>M</div> Impact to Business <div>M</div> Implementation Complexity	IM6 -Inventory policies do not formally incorporate the concept of safety stock	<ul style="list-style-type: none"> The inventory group only utilizes min / max levels. A formalized safety stock number does not exist for all part numbers / nor is it calculated within SAP. 	<ul style="list-style-type: none"> The inventory team needs to select a safety stock equation and utilize it to formulate / recommend future safety stock levels. To verify the equation and establish a more formulaic approach, the team should cross-check the number of times safety stock was utilized. The inventory management team must verify what safety stock symbolizes to both LIPA and PSEGLI stakeholders (i.e. Is this safety stock for non-storm operations or does safety stock also include inventory for storm demand).
<div>M</div> Impact to Business <div>M</div> Implementation Complexity	IM7- Minimum / Maximum stocking levels are formulated based on experiential knowledge	<ul style="list-style-type: none"> In one interview, the inventory manager commented that their maximum stocking level was derived by simply doubling the minimum stocking level. Inventory managers have ready access to 3-years of demand / consumption history 	<ul style="list-style-type: none"> The inventory team needs to select a minimum / maximum stocking level equation and utilize it to formulate / recommend future minimum / maximum stocking levels To verify the equation and a more formulaic approach, the team should cross-check fill rates and stock outs for part numbers.
<div>H</div> Impact to Business <div>M</div> Implementation Complexity	IM8 -Inventory policies do not incorporate "storm" clauses (which guarantee supply during critical periods) within supplier contracts	<ul style="list-style-type: none"> PSEG has not utilized a storm clause. The significance is that vendors may not be prepared for future requests or reliable if the clauses are not used. Assuming that storm clauses are reliable, inventory coverage is duplicated and more expensive than necessary. 	<ul style="list-style-type: none"> The inventory management team, in conjunction with the D&OP leadership team must decide on the associated supply risk versus inventory working capital expense associated with increasing the usage of "storm clauses". Based on this decision, safety stock levels will remain the same or should be decreased if it is decided that the organization will have greater reliance on "storm clauses".
<div>M</div> Impact to Business <div>M</div> Implementation Complexity	IM9 - Inventory policies are reviewed and potentially changed 1x per year	<ul style="list-style-type: none"> No historical inventory policy report is available to analytically review historical changes to inventory policies. Inventory policies rarely if ever shift during the year to account for storm versus non-storm season risk levels. 	<ul style="list-style-type: none"> It is not recommended to continuously change stocking levels with accompanying large swings in max / min quantities Based on agreed upon supply risk tolerance and inventory working capital exposure tolerances, the inventory team should shift overarching inventory levels and related policies based on storm versus non-storm seasons.

Inventory Management

Rating		Summary Finding	Finding Detail	Remediation
L	Impact to Business	IM10 - Limited stock rotation regime	<ul style="list-style-type: none"> Hicksville is piloting a visual queue stock rotation of wire within the racking system. No other stock rotation processes exist. 	During lulls in operational tempo, have warehousing / material handlers rotate agreed upon stock based on requirements set by LIPA.
	Implementation Complexity			
M	Impact to Business	IM11 –Limited ability to track PPE, consumables, and tools spend	<ul style="list-style-type: none"> PSEGLI can track total spend of PPE, consumables, and tools through a spend report and issuance report. 	PSEGLI should run existing issuance report and format to identify any outliers. This information should be communicated to LIPA on a monthly basis.
	Implementation Complexity			

Sourcing & Procurement as it relates to Inventory

Rating	Summary Finding	Finding Detail	Remediation
<div>H</div> Impact to Business <div>M</div> Implementation Complexity	SP1 - Nearly no usage of "storm" clauses in vendor contracts	<ul style="list-style-type: none"> [REDACTED] [REDACTED] Actions are being taken to increase usage of "storm clauses" by PSEG. However, the implementation date is unknown. Additionally, the proposed storm clause contract language is qualitative and does not appear to hold vendors to a measurable standard. 	<ul style="list-style-type: none"> PSEG must provide a measurable timeline for implementing future contracts with storm clauses. PSEG must provide a <u>quantitative</u> clause that outlines a vendor's responsibility for fulfilling future storm inventories. PSEG must provide a cost benefit analysis showing the trade-off between unit cost or other fees associated with vendors holding storm inventory and LIPA's on-site inventory costs.
<div>L</div> Impact to Business <div>M</div> Implementation Complexity	SP2 - No EDI / VMI	<ul style="list-style-type: none"> 5 of 77 vendors are set up for Electronic Data Interchange ("EDI") transactions. 50 of 77 vendors receive POs via email. No vendors are set up for Vendor Managed Inventory ("VMI"). 	<ul style="list-style-type: none"> Report on Purchase Order cycle time (from PR release to vendor acknowledgement). Continue to add vendors and message types as needed to speed Purchase Order cycle times.