FOR CONSIDERATION
September 27, 2018

TO: The Finance and Audit Committee of the Board of Trustees

FROM: Thomas Falcone

SUBJECT: Recommendation for the Approval of the Annual Report to the Board on the Power Supply Hedging Program Policy

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Requested Action

The Finance and Audit Committee ("F&A Committee") of the Board of Trustees of the Long Island Power Authority (the "Board") is requested to adopt a resolution recommending: (i) that the Long Island Power Authority and its subsidiary, LIPA (collectively the "Authority" or "LIPA") has complied with the Board Policy on the Power Supply Hedging Program (the "Policy"); (ii) approval of the annual report for the Policy; and (iii) approval of certain amendments to the Policy, which resolution is attached hereto as **Exhibit "A"**.

Background - Board Policy on the Power Supply Hedging Program

By Resolution No.1352, dated March 29, 2017, the Board adopted the Policy to maintain an effective commodity hedging program, focused on meeting the expectations of the Authority's customers for reasonable stability and predictability in power supply costs. The Policy is consistent with utility best practices.

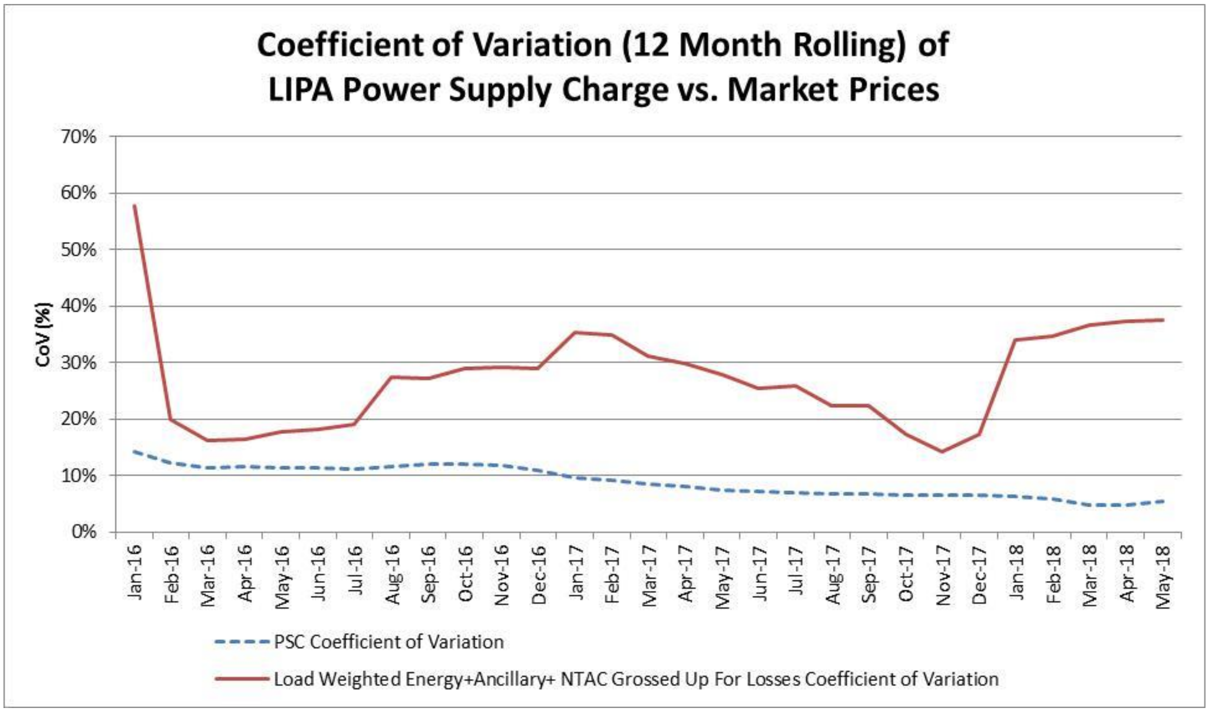
The F&A Committee of the Authority's Board of Trustees, in its charter, was delegated the responsibility of reviewing the Authority's practices relating to commodity risk management. Certain responsibilities, as set forth in the Policy, were delegated by the Board to the Executive Risk Management Committee ("ERMC").

Compliance with the Policy

Staff recommends that, for the reasons set for below, the Board find that the Authority has complied with the objectives of the Policy for the period since the last annual review.

The Policy is intended to "Mitigate a portion of the volatility of power supply costs in a programmatic and reasonable way on behalf of the Authority's customer-owners."

- The ERMC approves the LIPA Hedge Plan which identifies certain power supply cost components which can be fixed to create reasonable and stable rates. In general, hedging these cost components has proven to reduce the Power Supply Charge ("PSC") volatility in the absence of a hedging program and purchasing power in the open market. PSEG Energy Resource and Trade ("PSEG ER&T") presented to the F&A Committee at the July 25, 2018 meeting the following graph indicating the actual PSC volatility as compared to the volatility customers would be exposed to based upon unhedged market prices.



The Policy shall be "executed using financial derivative and physical supply and delivery contracts for a portion of the Authority's projected fuel and purchased power purchases, provided, however that: the net hedge position does not exceed 90% of projected fuel and purchased power needs; the term of any such hedge does not exceed ten years without the prior consent of the Board or a term in excess of sixty (60) months without the prior approval of the Finance and Audit Committee of the Board."

- PSEG ER&T authorized traders execute both financial and physical hedge transactions on the Authority's behalf for defined volumes over a 48-month period. All transactions are monitored by PSEG Enterprise Risk Management ("PSEG ERM") back office for compliance; PSEG ERM generates and distributes hedge ratio position reports daily, weekly and monthly to the Authority's ERMC staff.

- Hedge transactions are triggered based on a time or value trigger protocol that has been established with an independent third-party hedge advisor. Time-trigger transactions allow for the accumulation of minimum required volume hedge levels under all price environments, value-triggered transactions allow for the accumulation of additional hedge levels based on lower decile pricing levels of value versus 4-year historical pricing. In addition, volumes associated with Board Approved Purchase Power Agreements ("PPAs") having fixed prices and the Authority's 18% ownership of Nine Mile Point 2 are included as part of the hedged volume. Currently, the ERMC has set a maximum hedge level limit of 85%.

- No hedges exceed a term of sixty months and the net hedge position does not exceed 90% of projected fuel and purchased power needs, meeting the requirements of the policy.

The Policy states that it shall "Achieve appropriate risk mitigation and is not for purposes of financial speculation."

- All transactions are based on ERMC Approved projected fuel and power requirements associated with the Authority Approved annual sales forecast. Specific power supply component volumes are also validated against historical consumption data. Each hedge transaction is reviewed by PSEG ERM's middle-office risk management group for compliance to ERMC approved Hedge Plan and procedures.

The Policy states that it shall "Provide transparency regarding the Authority's commodity risk management activities and the results of such activities."

- PSEG ER&T and PSEG ERM provide to the ERMC staff on a daily basis a hedge transaction report, hedge position report and position valuation report. In addition, the following table identifies several other required reports to the ERMC, their distribution and reporting frequency and the originator of the reports.

Report	Distribution	Normal Frequency	Originator
Trading Activity Summary	ERMC Traders	Weekly	Middle Office
Position Report	ERMC Traders	Weekly	Middle Office
Credit Risk Exposure Reports	ERMC Traders	Weekly	Middle Office
ERMC Meeting Minutes	ERMC	As Meetings are Held	ERMC Designated Secretary
Benchmarking	ERMC	Quarterly	Independent third-party hedge advisor
Risk Management Activities	Board Finance & Audit Committee	At least four times per year	CFO or designee

The Policy requires "Ensuring that all Power Supply Hedging Program activities are in accordance with this Board Policy Statement".

- All active participants of the Power Supply Hedging Program are required to read and comply with the ERMC Approved Policies, Control and Procedures Manual for Power Supply Hedging ("Manual"), which incorporates the Board Policy. All active participants are required to certify compliance with the Manual and Policy by executing the Yearly Certification of Compliance with Risk Management Policy and Procedures Form.

The Policy requires "Determining the Authority's tolerance for exposure to fuel and purchased power price movements and power supply cost volatility taking into account the costs of limiting such exposure."

- The ERMC has approved a Manual for the hedging program that establishes the Authority's tolerance for exposure to fuel and purchased power price movements. The ERMC has established minimum and maximum hedging limits by time-period as well as collateral posting limits.

- The cost of the hedging program is evaluated each day in the form of mark-to-market value of the positions and stress testing collateral exposure potential of all positions execute to limit PSC volatility.

The Policy requires "Addressing all risk factors that are demonstrably quantifiable, actionable and material to the program."

- The ERMC approved Manual specifically identifies authorized markets and delivery points, permissible hedge instruments and the terms and volumes available for hedging to reduce PSC volatility. Within the Manual there is also a specific LIPA Hedge Plan that addresses the PSC hedge components that are quantifiable, actionable and there is market liquidity available to hedge the required products and delivery points (i.e. natural gas, gas basis, power, power basis).

The Policy requires "Establishing risk boundaries consistent with such tolerances and evaluating allowable financial and physical instruments in executing the Power Supply Hedging Program."

- The ERMC approved Manual specifically identifies authorized markets, delivery points, permissible hedge instruments, terms and volumes associated with hedging to reduce PSC volatility. Within the Manual there is also a specific LIPA Hedge Plan which addresses minimum and maximum hedge levels by time-period – consistent with utility peers.

The Policy requires "Establishing appropriate processes and protocols to review and monitor counterparty credit worthiness on a regular basis."

- The Manual identifies specific procedures carried out by PSEG Credit Risk Management on behalf of the Authority for managing and monitoring counterparty credit risk on an on-going basis. PSEG Credit Risk Management provides the ERMC with a credit report each week as noted above.

The Policy requires "Monitoring Commodity Futures Trading Commission rule making and all other regulatory and legal requirements to ensure that the Authority is taking all actions required to maintain compliance with respect to any transactions under the Power Supply Hedging Program."

- PSEG ER&T, PSEG Corporate Legal department and the Authority's outside counsel monitor Commodity Futures Trading Commission regulatory rule-making to determine what actions, if any, the Authority is required to undertake to assure continued compliance.

Proposed changes to the Board Policy

The proposed amendments to the Policy include:

- modifying the hedge term horizon in which the ERMC would require the approval of the Finance and Audit Committee of the Board from sixty (60) months to seventy-two (72) months. The modification is based on observed opportunities to lower month-to-month volatility of power supply costs to the Authority's customer-owners over a greater period of time;

- clarifying the ERMC's role under the Policy;

- recognizing PSEG ER&T's role on the Authority's behalf to manage the volatility associated with fuel and purchase power costs to the Authority's customer-owners;

- clarifying LIPA Staff's oversight responsibility under the Policy;

- amending the reporting requirement to the F&A Committee to semi-annual reporting with an annual compliance report; and

- certain other non-material wording changes.

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" Power Supply Hedging Program Policy (redline)
Exhibit "C" Power Supply Hedging Program Policy (clean)
Exhibit "D" Report to the Board on the Power Supply Hedging Program Policy

Exhibit A

RESOLUTION RECOMMENDING APPROVAL OF THE REPORT TO THE BOARD OF TRUSTEES ON THE POWER SUPPLY HEDGING PROGRAM POLICY

WHEREAS, the Power Supply Hedging Program Policy (the "Policy") was originally approved by the Board of Trustees by Resolution No.1352, dated March 29, 2017; and

WHEREAS, the Board has received the Staff report on compliance with the Policy; and

WHEREAS, the Board has reviewed the Policy and affirms that changes to the Policy are required.

NOW, THEREFORE, BE IT RESOLVED, that consistent with the accompanying memorandum, the Finance and Audit Committee of the Board hereby recommends: (i) finding that the Authority has complied with the Policy for the period since the last review; (ii) approval of the report to the Board; and (iii) approval of the updates to the Policy.

Dated: September 27, 2018

Board Policy: **Power Supply Hedging Program**

Policy Type: **Operating Policies**

Monitored by: **Finance and Audit**

Board Resolution: **#1352, approved March 29, 2017**

[#XXXX], amended September 27, 2018

Board Policy on Power Supply Hedging Program

Electric utilities are ~~routinely~~ ~~Authority is~~ exposed to volatile ~~energy~~ commodity prices in the normal conduct of their ~~its~~ operations. The~~se~~ costs to either purchase and deliver the fuel necessary to produce electricity in power plants owned or under contract to the Authority or to purchase power from other suppliers are recovered from the Authority's customers at cost through a Power Supply Charge that changes each month. ~~The Authority's customers have an interest in greater stability and predictability in power supply prices than those provided in the commodity markets for fuel and power.~~ An effective commodity hedging program provides LIPA's~~am is therefore integral to meeting the expectations of the Authority's~~ customers with greater~~for reasonable~~ stability and predictability in power supply costs than prices in the commodity markets~~over the near term,~~ and is ~~also~~ consistent with, and expected by, utility best practice.

It is the policy of the Board of Trustees for the Authority to maintain a Power Supply Hedging Program that:

- Mitigates a portion of the volatility of power supply costs in a programmatic and reasonable way on behalf of the Authority's customer-owners;
- Is executed using financial derivative and physical supply and delivery contracts for a portion of the Authority's projected fuel and purchased power purchases, provided, however that:
  - the net hedge position does not exceed 90% of projected fuel and purchased power needs;
  - the term of any such hedge does not exceed ten years without the prior ~~consent~~ approval of the Board or a term in excess of ~~sixty~~ seventy-two (72~~60~~) months without the prior approval of the Finance and Audit Committee of the Board;
- Achieves appropriate risk mitigation and is not for purposes of financial speculation; and
- Provides transparency regarding the Authority's commodity risk management activities and the results of such activities.

The Authority's Chief Executive Officer shall appoint an Executive Risk Management Committee ("ERMC") consisting of the Chief Financial Officer and at least two other Authority staff, one of which must be drawn from the senior management of the Authority. The ERMC ~~, to establish~~will establish, maintain, and monitor processes and controls~~, and~~ the conduct of the Authority's Power Supply Hedging Program, and the activities of ~~-~~its Service Provider, PSEG Energy Resource and Trade ("PSEG ER&T"). The key provisions of the ~~Executive Risk Management Committee~~ERMC's activities shall include:

- Oversight and ensuring ~~Ensuring~~ that all Power Supply Hedging Program activities conducted by the Authority and PSEG ER&T are in accordance with this Board Policy Statement;
- Determining the Authority's tolerance for exposure to fuel and purchased power price movements and power supply cost volatility ~~taking into account~~considering the costs of limiting such exposure;
- Addressing all risk factors that are demonstrably quantifiable, actionable and material to the program;
- Establishing risk boundaries consistent with such tolerances and evaluating allowable financial and physical instruments in executing the Power Supply Hedging Program;
- Establishing appropriate processes and protocols to review and monitor counterparty credit worthiness on a regular basis; and
- Monitoring Commodity Futures Trading Commission rule making and all other regulatory and legal requirements to ensure that the Authority is taking all actions required to maintain compliance with respect to any transactions under the Power Supply Hedging Program~~; and~~ .

PSEG ER&T will report to the F&A Committee biannually on the Power Supplye Hedging Program. -Additionally, t~~T~~he Chief Executive~~Financial~~ Officer, or his or her designee, will provide an annual compliance report on the Power Supply Hedging Program to the Finance and Audit Committee~~ of the Board of Trustees no less than four times per year~~.

Board Policy:	**Power Supply Hedging Program**
Policy Type:	**Operating Policies**
Monitored by:	**Finance and Audit**
Board Resolution:	**#1352, approved March 29, 2017**
	[#XXXX], amended September 27, 2018

Board Policy on Power Supply Hedging Program

Electric utilities are exposed to volatile commodity prices in the normal conduct of their operations. The costs to either purchase and deliver the fuel necessary to produce electricity in power plants owned or under contract to the Authority or to purchase power from other suppliers are recovered from the Authority's customers at cost through a Power Supply Charge that changes each month. An effective commodity hedging program provides LIPA's customers with greater stability and predictability in power supply costs than prices in the commodity markets and is consistent with, and expected by, utility best practice.

It is the policy of the Board of Trustees for the Authority to maintain a Power Supply Hedging Program that:

- Mitigates a portion of the volatility of power supply costs in a programmatic and reasonable way on behalf of the Authority's customer-owners;
- Is executed using financial derivative and physical supply and delivery contracts for a portion of the Authority's projected fuel and purchased power purchases, provided, however that:
    - the net hedge position does not exceed 90% of projected fuel and purchased power needs;
    - the term of any such hedge does not exceed ten years without the prior approval of the Board or a term in excess of seventy-two (72) months without the prior approval of the Finance and Audit Committee of the Board;
- Achieves appropriate risk mitigation and is not for purposes of financial speculation; and
- Provides transparency regarding the Authority's commodity risk management activities and the results of such activities.

The Authority's Chief Executive Officer shall appoint an Executive Risk Management Committee ("ERMC") consisting of the Chief Financial Officer and at least two other Authority staff, one of which must be drawn from the senior management of the Authority. The ERMC will establish, maintain, and monitor processes and controls, the conduct of the Authority's Power Supply Hedging Program, and the activities of its Service Provider, PSEG Energy Resource and Trade ("PSEG ER&T"). The key provisions of the ERMC's activities shall include:

- Oversight and ensuring that all Power Supply Hedging Program activities conducted by the Authority and PSEG ER&T are in accordance with this Board Policy Statement;

- Determining the Authority's tolerance for exposure to fuel and purchased power price movements and power supply cost volatility considering the costs of limiting such exposure;
- Addressing all risk factors that are demonstrably quantifiable, actionable and material to the program;
- Establishing risk boundaries consistent with such tolerances and evaluating allowable financial and physical instruments in executing the Power Supply Hedging Program;
- Establishing appropriate processes and protocols to review and monitor counterparty credit worthiness on a regular basis; and
- Monitoring Commodity Futures Trading Commission rule making and all other regulatory and legal requirements to ensure that the Authority is taking all actions required to maintain compliance with respect to any transactions under the Power Supply Hedging Program.

PSEG ER&T will report to the F&A Committee biannually on the Power Supply Hedging Program. Additionally, the Chief Executive Officer, or his or her designee, will provide an annual compliance report on the Power Supply Hedging Program to the Finance and Audit Committee.

Power Supply Hedging Program Summary Report

August 2018

Power Supply Hedging Program Summary Report - as of August 31, 2018

Ref.	Hedge Position	Bal. of 2018	2019	2020	2021	2022
1	Hedge Ratio %: Swaps, Options + FP Physical Contracts	71%	69%	63%	51%	41%
2	Change from last Month, %	2%	0%	0%	0%	0%

Ref.	Mark-to-Market ($ millions)			Collateral, Received / (Posted) All Forward Periods		
	Realized		Unrealized			
	Aug-18	YTD	All Forward Periods, Unrealized*	As of 8/31/2018	As of 7/31/2018	*Change Since Last Month*
3	$0.4	$16.8	($3.7)	($23.6)	($24.3)	*$0.7*

*Includes the Net Present Value ("NPV") of all forward MtM and Premium values

- **LIPA remains in compliance with the Board Policy on Power Supply Hedging**:
  - Maximum hedge level is below the Policy maximum of 90% of projected fuel and power needs
  - Maximum term is below the Policy maximum of 60 months
  - All hedges are for the purpose of appropriate risk mitigation
- **Hedge Ratio for the balance of 2018 increased 2% to 71%, while Hedge Ratios for 2019 – 2022 remained unchanged as reflected on Line Ref. #1 and #2**
- **August 2018 realized hedge gains totaled $0.4M** and the **unrealized MtM value increased by $11.7M to -$3.7M** versus the end of July 2018; while **LIPA collateral posting decreased $0.7M to $23.6M** as noted on Line Ref. #3
- **Daily cash gas prices observed at Transco Zone 6 NY ranged from $2.78 to $3.47/dthm**, approximately **$0.12/dthm higher than July's prices, as a result of continued above normal temperatures in the Northeast and increased power burn for cooling demand**. EIA is projecting **gas inventory for the winter to be at much lower levels that seen in years past and gas prices for the winter are moving higher**. Despite higher gas usage for power and low inventory levels, **record U.S. natural gas production may limit the upward price direction**.
- Natural gas remained the least costly fuel to consume at the LI generating fleet (94% natural gas, 6% liquid fuels) in August

LIPA Long Island Power Authority