

LONG ISLAND POWER AUTHORITY

MINUTES OF THE 271ST MEETING

HELD ON DECEMBER 19, 2017

The Long Island Power Authority (the “Authority”) was convened for the two-hundred-and-seventy first at 11:35 a.m. at LIPA’s Headquarters, Uniondale, NY, pursuant to legal notice given on December 14, 2017, and electronic notice posted on the Authority’s website.

The following Trustees of the Authority were present:

**Ralph V. Suozzi, Chair
Elkan Abramowitz
Sheldon L. Cohen
Matthew Cordaro
Mark Fischl
Peter Gollon
Jeffrey Greenfield
Thomas McAteer**

Representing the Authority were Thomas Falcone, Chief Executive Officer; Joseph Branca, Chief Financial Officer; Jon Mostel, General Counsel & Secretary to the Board of Trustees; Rick Shansky, Vice President of Operations Oversight; Bobbi O’Connor, Vice President of Policy, Strategy and Administration & Assistant Secretary to the Board of Trustees, Kenneth Kane, Vice President of Financial Oversight and Sid Nathan, Director of Public Affairs.

Representing PSEG Long Island were Daniel Eichhorn, President and COO; Rick Walden, Vice President of Customer Service; John O’Connell, Vice President of Transmission & Distribution; David Lyons, Vice President of Business Operations; Vaughn McKoy, Vice President of Legal; and Paul Napoli, Vice President of Power Markets.

Chair Suozzi welcomed everyone to the 271st meeting of the Long Island Power Authority Board of Trustees and led the Pledge of Allegiance.

Chair Suozzi then stated that the first item on the agenda was the Consideration of a Resolution Acknowledging the Dedicated Service of Trustee Suzette Smookler to the Customers of the Long Island Authority.

Upon a motion duly made and seconded, the following resolution was passed by the Trustees.

**1385. THE LONG ISLAND POWER AUTHORITY BOARD OF TRUSTEES
RESOLUTION ACKNOWLEDGING THE DEDICATED SERVICE OF TRUSTEE
SUZETTE SMOOKLER TO THE CUSTOMERS OF THE LONG ISLAND POWER
AUTHORITY**

WHEREAS, Trustee Suzette Smookler served on the Board of Trustees of the Long Island Power Authority for more than eleven years; and

WHEREAS, Trustee Smookler used her experience in healthcare, education, and local government to be a vocal advocate for a smarter, cleaner and more affordable electric grid for Long Island and the Rockaways; and

WHEREAS, Trustee Smookler's compassion, consideration and love of community propelled her to president of the Port Jefferson School Board, to a distinguished career in healthcare, and to residing with her husband in Suffolk County for the past 36 years; and

WHEREAS, upon her resignation on October 2, 2017, Trustee Smookler was the Board's longest serving member, having diligently and thoughtfully served the people of Long Island and the Rockaways; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Trustees hereby duly recognizes the friendship and faithful service of Trustee Smookler to the State of New York and the customers of the Long Island Power Authority.

Chair Suozzi then stated that the next item on the agenda was the Consideration of the Consent Agenda Items.

After questions and a discussion by the Trustees, and the opportunity for the public to be heard, upon a motion duly made and seconded, the following resolutions were unanimously adopted by the Trustees based on the memoranda summarized below.

1386. APPROVAL OF MINUTES AND RATIFICATION OF ACTIONS TAKEN AT THE SEPTEMBER 27, 2017 MEETING OF THE BOARD OF TRUSTEES OF THE LONG ISLAND POWER AUTHORITY

RESOLVED, that the Minutes of the meeting of the Authority held on September 27, 2017 are hereby approved and all actions taken by the Trustees present at such meeting, as set forth in such Minutes, are hereby in all respects ratified and approved as actions of the Authority.

Requested Action

The Trustees are requested to approve a resolution authorizing the Chief Executive Officer, or his designee, to engage Donnelly & More, Inc., Unique Comp Inc., 22nd Century Technologies, Inc. and Infosys International, Inc. to provide Information Technology (IT) Consulting Services to the Authority for a period of 5 years.

Background

LIPA's existing contracts for IT services expire in February 2018. For continuity of its operations, LIPA requires the services of consultants with IT skill sets such as: IT Systems Support Engineer, IT Project Management, Network Support Engineer, Helpdesk Analyst, Data Security Analyst, Technical Writer and Web Developer.

Discussion

On August 1, 2017, LIPA issued a Request for Proposals (RFP) on or before September 29, 2017, seeking qualified firms to provide IT services to LIPA for a term of (5) five years. The RFP was posted in the NYS Contract Reporter and published on LIPA's website. Twenty-three (23) firms responded to the RFP. One firm, Abis Solutions, was deemed nonresponsive because it failed to indicate whether it agreed with LIPA's Terms and Conditions or had any exceptions. A second firm's proposal, UTC Associates, was rejected as untimely.

The remaining twenty-one proposals were evaluated technically by three LIPA staff members, while Procurement reviewed the proposals for cost and compliance with MWBE/SDVOB goals.

LIPA conducted interviews with representatives of eleven firms pursuant to New York State Office of Comptroller Procurement Guidelines because the technical scores for these proposals were separated by 15 points or less.

Four finalists were selected by LIPA’s evaluation team. Initially, Lockheed-Martin (“Lockheed”) was selected as the 4th highest scoring vendor with a total score of 77.40. However, Lockheed’s proposal included numerous requested changes to LIPA’s standard contract Terms and Conditions. After being advised the proposed contract changes were unacceptable, Lockheed withdrew its proposal. Rather than select only three finalists, whose individual skill sets may not be sufficient to meet the Authority’s needs, LIPA recommends awarding a contract to the next highest scoring vendor - Infosys International Inc., whose total score was only 0.9 points below Lockheed’s.

Below are the final scores for the top 4 vendors:

Firms	Score
Donnelly & More Corporation	86.20
Unique Comp Inc.	85.33
22 nd Century Technologies, Inc.	81.73
InfoSys International, Inc.	76.50

Recommendation

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

1387. RESOLUTION APPROVING THE ENGAGEMENT OF INFORMATION TECHNOLOGY CONSULTING SERVICES

RESOLVED, that consistent with the attached memorandum, the Chief Executive Officer or his designee be, and hereby is, authorized to engage Donnelly & More, Inc., Unique Comp Inc., 22nd Century Technologies, Inc. and InfoSys International, Inc to provide Information Technology Consulting Services for a period of five (5) years.

Requested Action

Provide a Resolution of support to the Internal Revenue Service

The Trustees are requested to provide a Resolution of Support to the Internal Revenue Service to disqualify the qualified Nuclear Decommissioning Trust Fund (the “Qualified Fund”) for Nine Mile Point 2 Nuclear Power Station and transfer the assets to the non-qualified Nuclear Decommissioning Trust Fund (the “Non-Qualified Fund”) (together, the “Funds”).

Background

The Long Island Lighting Company (“LILCO”), a wholly owned subsidiary of LIPA, owns an 18 percent interest in the Nine Mile Point Nuclear Power Station Unit 2 (the “Plant”), a nuclear generating facility near Oswego, New York. In connection with such ownership, LILCO must maintain one or more nuclear decommissioning funds to hold assets set aside for the cost of decommissioning the Plant. LILCO has both a qualified nuclear decommissioning fund and a non-qualified nuclear decommissioning fund for the Plant. The sole difference between the Funds is their Federal income tax treatment. Since acquiring LILCO in 1998, LIPA has been paying Federal income tax on the earnings of the Qualified Fund. Now, for tax and administrative reasons, LILCO desires to terminate the Qualified Fund and transfer all its assets to the Non-Qualified Fund. Such action would relieve LILCO of its income tax obligation under the Qualified Fund. LIPA believes such a transfer will result in present value tax savings of approximately \$16 million, while continuing to preserve all the assets required for decommissioning the Plant.

On May 29, 1990, LILCO signed a trust agreement (the “Trust Agreement”) with Mellon Bank as Trustee. Under the Trust Agreement, LILCO established both the Qualified Fund and the Non-Qualified Fund to hold monies for decommissioning the Plant. LILCO also established a trust (the “Trust”) for the collective investment of both Funds. As of October 30, 2017, approximately \$125.8 million is in the collective Trust; 53 percent of this amount is in the Non-Qualified Fund, while the remaining 47 percent is in the Qualified Fund. Because the Funds’ assets are held together in the Trust, transferring assets from one fund to the other would be considered an allocation rather than a physical transfer of assets. LIPA also expects that the transfer will trigger a one-time Federal income tax liability of approximately \$1.77 million on the gain on the assets held in the Qualified Fund.

LIPA/DPS Support Requirement

The Authority has been working with outside counsel to determine the best way to eliminate the ongoing tax liability. After discussions with counsel and a conference with the IRS, LIPA pursued the disqualification of the Qualified Fund. The Trust Agreement contains two provisions relevant to the termination of the Qualified Fund and transferring its assets. Section 5.02 of the Trust Agreement provides that the “applicable portion of the Qualified Fund shall terminate upon its disqualification from the application of 468A of the Code, whether pursuant to an administrative action on the part of the [IRS] or the decision of any court of competent jurisdiction.” Section 5.04 of the Trust Agreement further provides that, upon termination of any fund, the Trustee shall liquidate the assets of the fund and distribute them to LILCO; “provided, however, that no such distribution shall be made unless either (a) an Order¹ has been issued which specifically authorizes such distribution or (b) the Trustee has received an opinion of legal counsel to [LILCO] to the effect that no such Order is necessary to authorize the distribution.” Because the disqualification of the Qualified Fund will not result in a physical transfer of assets, and all assets will remain solely dedicated to decommissioning, an Order is unnecessary to satisfy the Trust Agreement, but the IRS indicated that a letter of support from the state regulatory body would be required to obtain

¹ Section 1.01(21) defines “Order” as “any action relating to decommissioning the Plant issued by the [New York Public Service Commission] or the [Nuclear Regulatory Commission].”

a favorable ruling. The reasoning for the IRS request is that state regulatory agencies help ensure sufficient funding is available to decommission nuclear power plants.

Counsel has informed the IRS that the Public Service Commission does not have regulatory jurisdiction over LILCO and requested permission to provide support from LIPA's Board of Trustees and the Department of Public Service ("DPS"). The IRS indicated that they want the support to come from the entity that approves the contributions to the Funds. Because LIPA's Board of Trustees approves the contributions, and DPS has oversight authority over LIPA, support from these entities should be sufficient for IRS purposes. Counsel also plans to prepare a brief memorandum to explain to the IRS why LIPA and DPS – and not the PSC – are the proper entities to provide such support.

Recommendation

Based upon the foregoing and the recommendation of the Finance and Audit Committee, I recommend that the Trustees adopt the attached Resolution.

1388. RESOLUTION SUPPORTING THE PROPOSED TRANSFER OF ASSETS FROM THE QUALIFIED NUCLEAR DECOMMISSIONING FUND (THE "QUALIFIED FUND") TO THE NON-QUALIFIED NUCLEAR DECOMMISSIONING FUND (THE "NONQUALIFIED FUND"), AS ESTABLISHED FOR THE NINE MILE POINT NUCLEAR POWER STATION UNIT 2 FACILITY (THE "PLANT")

WHEREAS, on May 29, 1990, the Long Island Lighting Company ("LILCO") entered into a trust agreement (the "Trust Agreement") with Mellon Bank as Trustee establishing both a qualified nuclear decommissioning fund and a non-qualified nuclear decommissioning fund (collectively the "Funds") to hold monies for decommissioning the Plant; and

WHEREAS, LILCO also established a trust (the "Trust") for the collective investment of both Funds; and

WHEREAS, pursuant to transactions undertaken in 1997, LILCO is now a wholly-owned subsidiary of the Long Island Power Authority ("LIPA"), a tax-exempt municipal instrumentality of the State of New York; and

WHEREAS, in 1998, LILCO and LIPA obtained a private letter ruling from the IRS, which provided that LILCO is not subject to tax so long as it remains wholly-owned by LIPA and continues to operate as a state agency; and

WHEREAS, in connection with the transfer of assets from the Qualified Fund to the Non-Qualified Fund, LILCO would no longer pay federal income tax on the investment earnings for the Qualified Fund but all assets in the Funds will continue to be solely dedicated to the decommissioning of the Plant; and

WHEREAS, the Internal Revenue Service ("IRS") has requested that the entity that approves contributions to the Funds support such transfer of assets; and

WHEREAS, the Board desires to indicate its support of the proposed transfer of assets from the Qualified Fund to the Non-Qualified Fund.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Trustees hereby supports the proposed transfer of assets from the Qualified Fund to the Non-Qualified Fund.

Requested Action

The Trustees are requested to approve a resolution authorizing the Chief Executive Officer, or his designee, to engage Debt Compliance Services LLC to provide a Debt Covenant Compliance System to the Authority for a period of 5 years.

Background

In the normal course of business, the Authority issues debt for capital expenditures and to provide working capital. There are various series of bonds issued under resolutions and notes with Letters of Credit from different banks. The bonds and notes have various disclosure and covenant requirements, as well as reporting obligations with numerous parties including but not limited to: banks, bond insurers, swap counterparties, rating agencies, LOC providers and bond trustees.

Discussion

On July 31, 2017, LIPA issued an RFI (Request for Information) for vendors to provide a software system that would facilitate and automate some of the tasks related to the requirements described above. Only one firm, Debt Compliance Services LLC, responded to the RFI.

On October 3, 2017, an RFP was issued, advertised on the New York State Contract Reporter, and posted on LIPA's website and in the Bond Buyer.

On or before October 26, 2017, two responses were received; one from Debt Compliance Services LLC and the other from Rockfleet Financial Services, Inc.

Both proposals were evaluated technically by three LIPA staff members from the Finance Department, while Procurement reviewed them for responsiveness, cost and MWBE/SDVOB aspects.

The system that Rockfleet proposed is not currently in use by any other company, so LIPA would be Rockfleet's first customer. Furthermore, their pricing is approximately 8 times higher than the price proposed by Debt Compliance Services LLC.

Below are the final scores for the two vendors:

Firms	Score
Debt Compliance Services, LLC	80.24
Rockfleet Financial Services, Inc.	24.84

Recommendation

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

1389. RESOLUTION APPROVING THE ENGAGEMENT OF A VENDOR TO PROVIDE A DEBT COVENANT COMPLIANCE SYSTEM

RESOLVED, that consistent with the attached memorandum, the Chief Executive Officer or his designee be, and hereby is, authorized to engage Debt Compliance Services, LLC to provide a debt covenant compliance system for a period of five (5) years.

The Chair stated that the next item on the agenda was the CEO’s Report presented by Thomas Falcone.

Mr. Falcone presented the CEO Report and took questions from the Trustees.

The Chair stated that the next item on the agenda was the consideration of Approval of Power Purchase Agreement with Riverhead Solar Farm.

After requesting a motion on the matter, which was seconded, the Chair indicated that the matter would be presented by Rick Shansky.

Mr. Shansky presented the following action item:

Requested Action

The Trustees are requested to approve and adopt a resolution authorizing the Chief Executive Officer or his designee to execute a Power Purchase Agreement for the purchase of renewable energy, related capacity and renewable attributes (“PPA”) with Riverhead Solar Farm, LLC (“RSF”), a wholly owned subsidiary of the proposer, FTP Power LLC d/b/a sPower, and to take such actions as are necessary to implement arrangements for the Long Island Power Authority (the “Authority”) to purchase power from the proposed Riverhead Solar Farm project (“RSF Project”).

Background

In December 2014, the Trustees approved the selection of eleven proposals in response to the Authority's October 18, 2013 Request For Proposals for 280 MW of New, On-Island, Renewable Capacity and Energy ("280 MW Renewable RFP"). Subsequent to approval, the project sponsor initiated appropriate environmental review with local municipal officers and began negotiating the power purchase agreement with PSEG Long Island, which acted on behalf of the Authority. The RSF Project represents one of the eleven selected proposals.

RSF proposes to construct, own, operate and maintain a renewable energy generating facility with a nominal rating of 20.0 megawatts (MW). The RSF Project will be located on approximately 110 acres of private lands in the Town of Riverhead, New York. The RSF Project will have an aggregate nameplate capacity of approximately 23 MW (dc) or 20 MW(ac). The panels will be erected on a single-axis tracker mounting system supported by steel pilings driven into the ground. Electricity from the RSF Project will be delivered to the Authority's Edwards Avenue substation via approximately 1.6 miles of 34.5 kV underground cable and stepped up to 138 kV in a collector substation to be constructed by RSF next to the Edwards Avenue substation.

The Authority would use the RSF Project to help meet its service territory's energy requirements and achieve LIPA's renewable energy goals. LIPA staff has reviewed the proposed terms that were negotiated by PSEG Long Island and concluded that it is appropriate for LIPA to enter into the PPA with RSF.

Discussion

Under the proposed PPA, the Authority will purchase all renewable energy, related capacity and renewable attributes from the RSF Project during a term of twenty (20) years at a fixed price, at a total cost of approximately \$122 Million. The proposed PPA gives the Authority a one-time option to select a lower contract price in exchange for the Seller's option to extend the term by up to an additional ten (10) years. The PPA requires RSF to obtain all required Federal, State and local permits, enter into necessary contracts to construct the RSF Project, obtain equity and debt financing for the Project, and reach key Project construction milestone dates. RSF would be subject to payment of specified liquidated damages for failure to meet the required construction milestones or failure to construct the proposed amount of capacity.

The terms of the contract are consistent with, if not more favorable than the original RSF proposal. There have been certain improvements in the contract relevant to the original proposal, most notable that RSP Project has committed to a higher performance guarantee, which will help assure that the Authority receives all of the renewable energy that the RSF Project is designed to produce. Additionally, LIPA has the option at a future date to initiate prepayment negotiations with RSF which could result in additional savings over the term of the agreement.

The Town of Riverhead Planning Board, as SEQRA Lead Agency, adopted SEQRA Findings Statement for the RSF Project by Resolution dated October 19, 2017, which concluded that the Project avoids or minimizes adverse environmental impacts to the maximum extent practicable.

Recommendation

For the foregoing reasons, I recommend that the Trustees authorize the Chief Executive Officer or his designee to take all actions, including, without limitation, execution of the RSF Project PPA and all other related agreements to enable the Authority's purchase of renewable power from the RSF Project described above.

After questions and a discussion by the Trustees and the opportunity for the public to be heard, upon motion duly made and seconded, the following resolution was passed by the Trustees.

1390. AUTHORIZATION TO ENTER INTO POWER PURCHASE AGREEMENT WITH RIVERHEAD SOLAR FARM LLC FOR THE PURCHASE OF RENEWABLE ENERGY, RELATED CAPACITY AND RENEWABLE ATTRIBUTES FROM THE RIVERHEAD SOLAR FARM PROJECT

WHEREAS, on October 18, 2013, the Long Island Power Authority (the "Authority") issued the Request For Proposals for up to 280 MW of New, On-Island, Renewable Capacity and Energy ("280 MW RFP") for the addition of up to 280MW of renewable energy, including all associated capacity and environmental attributes; and

WHEREAS, after analyzing all responses to the 280 MW RFP, Trustees approved negotiations of 20-year power purchase agreements ("PPA") with 11 selected proposals, including the Riverhead Solar Farm Project proposed by FTP Power LLC d/b/a sPower, the parent company to Riverhead Solar Farm, LLC; and

WHEREAS, The Town of Riverhead Planning Board ("Planning Board") acted as the Lead Agency for the purposes of a coordinated environmental review pursuant to the State Environmental Quality Review Act ("SEQRA"); and

WHEREAS, on October 19, 2017, the Planning Board adopted SEQRA Findings for the RSF Project by Resolution which concluded the Project avoids or minimizes adverse environmental impacts to the maximum extent practicable.

WHEREAS, it is in the best interest of the Authority to meet the need for renewable energy by entering into a power purchase agreement ("PPA") for the Riverhead Solar Farm Project; WHEREAS, the Authority's renewable energy goals will be supported by entering

into a PPA and other related agreements regarding the Riverhead Solar Farm Project; NOW, THEREFORE, BE IT RESOLVED, that the Chief Executive Officer and his designee be and hereby are authorized to execute and effect a PPA and other related agreements and arrangements, consistent with the terms of the accompanying memorandum, and to perform such further acts and deeds as may be necessary, convenient or appropriate, in the judgment of the Chief Executive Officer or his designee, to implement the Authority's purchase of renewable energy, related capacity and renewable attributes from the Riverhead Solar Farm LLC; and be it further RESOLVED, that, if the Authority and Riverhead Solar Farm LLC or its successor or assign reach an agreement on the terms of a prepayment of a portion of contract payments due under the PPA, and the Authority intends to finance all of a portion of the cost of such prepayment and any related costs through the issuance of tax-exempt debt of the Authority, the Board hereby authorizes each of the chief executive officer, the chief financial officer or their respective designees to evidence such intent by appropriate certifications.

The Chair stated that the next item on the agenda was the consideration of Tariff Changes Related to Value of Distributed Energy Resources, Municipal Undergrounding, and Remote Meter Reading.

After requesting a motion on the matter, which was seconded, the Chair indicated that the matter would be presented by Rick Shansky.

Mr. Shansky presented the following action item:

Requested Action

The Trustees are requested to approve changes to the Authority's Tariff for Electric Service ("Tariff") effective January 1, 2018¹ (1) to provide for more accurate compensation for distributed energy resources ("DER"), consistent with the New York Public Service Commission (the "Commission")'s *Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters* (the "VDER Order")²; (2) to provide for undergrounding of all or a portion of transmission or distribution line construction at the request of a municipality; and (3) to remove remote meter charges as Advanced Meter Infrastructure ("AMI") meters are being implemented system wide.

¹ Although the Tariff changes become effective on January 1, 2018, certain grandfathering deadlines have been extended in response to public comments, as described below.

² Case 15-E-0751 et al., *In the Matter of the Value of Distributed Energy Resources* ("VDER Proceeding"), Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters (issued March 9, 2017).

Additionally, Staff proposes to update the Community Distributed Generation (“CDG”) provisions of the Tariff, consistent with Commission orders affecting the State’s investor-owned utilities,³ to extend eligibility to CDG hosts with fewer than 10 enrolled CDG satellite accounts where the CDG project is located on the site of a multi-unit dwelling.

Background of VDER Proposal

Introduction. The Authority continues to pursue New York State’s clean energy goals and the development of distributed energy resources.⁴ The VDER Order began a transition from the existing framework for compensating DER installed behind-the-meter—known as net energy metering—to a more accurate, value-based compensation framework that will benefit all customers by promoting sustainable DER development at a cost that is commensurate with the benefits it provides, while continuing to support the goals of the Reforming the Energy Vision (“REV”)⁵ initiative and the Clean Energy Standard.⁶

Net Energy Metering. “Net Energy Metering” or “NEM”—the existing DER compensation framework—allows electric customers who own an eligible electricity generation system to offset their electric utility bill on a volumetric basis with the electricity generated by their system. New York’s original net-metering statute applied only to residential solar photovoltaic (PV) systems. Over the years, the law was expanded to include other forms of electric generation equipment including farm waste, wind, micro-hydro, fuel cell, and combined heat and power systems.

NEM was initially subject to a rated generating capacity ceiling in each utility service territory equal to one 1% percent of the 2005 electric demand for each utility. Subsequently, the Authority increased the ceiling to 3% and currently has waived any limitations or restrictions on the ceiling, consistent with statewide policy.

³ Case 15-E-0082, Order Modifying Community Distributed Generation Membership Requirements (issued March 13, 2017)

⁴ In addition to NEM, LIPA has issued two requests for proposals (“RFPs”) for utility-scale renewables and four feed-in tariffs (“FITs”) for commercial rooftop solar and fuel cells, resulting in 210-275 megawatts of solar and fuel cell projects and 90 megawatts of offshore wind. The utility-scale RFPs and FITs are alternative programs to net metering, VDER, and CDG that target similar project sites, technologies, and developers, and have been successful in the Long Island service territory. LIPA will evaluate on an ongoing basis offering future RFPs and feed-in tariffs here of the Clean Energy Standard.

⁵ Case 14-M-0101, Reforming the Energy Vision, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2016) (REV Framework Order or Track One Order); Order Adopting a Ratemaking and Utility Revenue Model Policy Framework (issued May 19, 2016) (Track Two Order).

⁶ Case 15-E-0302, *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard*, Order Adopting a Clean Energy Standard (issued August 1, 2016) (“CES Order”).

As of September 2017, the total DER generating capacity in Long Island currently compensated under NEM exceeded 5.5% of the Authority's 2005 peak demand and is expected to continue increasing. While NEM is a simple method for compensating DER, DER is effectively "paid" the retail rate for electricity, even though customers with DER continue to rely on the grid for sales and purchases of electricity.

Customers currently receiving NEM will not be affected by this proposal. In addition, residential and small commercial customers who add solar (or other DERs) by January 1, 2020 will continue to receive NEM, with minor modifications, for 20 years.

The VDER Order. On March 9, 2017, the Commission adopted the first phase of its transition from NEM to VDER in its VDER Order, which outlined a new framework for compensating solar and other distributed energy projects to better reflect the value and benefits provided to the grid by solar and other DERs while maintaining a smooth transition and grandfathering provisions to protect customers who had already made DER investments.

In the VDER Order, the Commission introduced the "Phase One Value Stack" – the first step of a new compensation framework based on summing the components of DER value to the grid, the utility, and the utility's other customers. The components of value include energy, capacity, environmental, demand reduction, locational value, and for certain customers a CDG transition credit. The Commission's Phase One Value Stack began applying to demand-metered commercial, community distributed generation, and remote net metering customers of the State's investor-owned utilities as of June 9, 2017. DERs subject to the Phase One Value Stack receive monetary credit for net hourly electricity exported to the grid. Excess credit will be eligible for carry-over to subsequent billing for a term of 25 years.

Proposed Action to Implement VDER

Staff proposes to modify the Authority's Tariff for Electric Service to implement Phase One of the Commission's VDER Order.⁷

Grandfathering of Existing Net Energy Metering

The following customers will be grandfathered and remain on existing NEM rules for the life of the customer's system:

- Existing NEM enrolled customers;

⁷ Aside from timing differences, there are two differences between the Authority's VDER proposal, as amended, and the Commission's VDER Order. The differences are explained below in the comment section. Authority staff will work with the DPS staff to bring the Authority's VDER Tariff into closer alignment with the PSC's VDER orders in subsequent phases.

- **Eligible mass market (i.e. residential and small commercial) customer-generators who become substantially interconnected by January 1, 2018;**⁸
- **Eligible demand-metered commercial customer-generators, demand-metered commercial participants in community distributed generation projects, and remote net metering hosts, who have submitted complete applications by April 30, 2018.**⁹

Phase One Net Energy Metering

Mass market customers who submit complete applications on or after January 1, 2018 and become substantially interconnected by January 1, 2020¹⁰ will be eligible for Phase One NEM. Phase One NEM is identical to the existing NEM framework, *except* that:

- **Phase One NEM is subject to a 20-year sunset, after which time the customer will be moved to the compensation system then in effect;**
- **Unused credits will roll over to next billing period for the full 20-years (instead of being cashed out annually); and**
- **Any credits remaining after the twentieth year will be forfeited.**

Also eligible for Phase One NEM are mass market customers who participate as satellites in community distributed generation projects that become substantially interconnected after January 1, 2018 and before the earlier to occur of (i) January 1, 2020 and (ii) the date on which the total capacity of NEM and CDG projects interconnected after the tariff effective date reaches 94 megawatts.¹¹ After January 1, 2020, and if the total capacity of NEM and CDG projects interconnected after the effective date reaches 94 megawatts before January 1, 2020, new mass market CDG customers will be compensated under the Phase One Value Stack plus a CDG transition credit as described below.

⁸ Substantial interconnection will be determined by reference to the PSEG Long Island Smart Grid Small Generator Standardized Interconnection Procedures (“Smart Grid SGIP”). Systems in the Smart Grid SGIP Fast Track process will be considered substantially interconnected upon completion of Step 6 of the Fast Track process. Systems sized between 50 kW and 5,000 kW will be considered substantially interconnected upon completion of Step 7 of the Smart Grid SGIP. (Systems larger than 2,000 kW are ineligible for net metering under the current Tariff. The PSC is considering raising this cap to 5,000 kW, at which time the Authority staff would invite the Board to consider doing the same.)

⁹ To be considered complete, an application must include all items required in Appendix F of the PSEG Long Island Smart Grid Small Generator Standardized Interconnection Procedures (“Smart Grid SGIP”), *available at* <https://www.psegliny.com/files.cfm/SGIP.pdf>.

¹⁰ The Commission has indicated that it will issue a Phase Two VDER Order to go into effect on January 1, 2020. The Authority intends to implement Phase Two on January 1, 2020, or as soon thereafter as reasonably practicable in light of administrative rulemaking procedures applicable to the Authority.

¹¹ 94 megawatts is the Authority’s equivalent of the PSC’s Tranches 0 and 1, calculated as 25% of 7% of 2016 peak load of 5,394 megawatts.

Phase One Value Stack

Demand-metered commercial customer-generators, demand-metered commercial participants in community distributed generation projects, and remote net metering hosts that submit complete applications after April 30, 2018 will be compensated using the Phase One Value Stack.

- Participants will receive monetary credits (as opposed to volumetric) for excess generation in any hour according to the Phase One Value Stack described below.
- Unused credits will roll over to next billing period, except that credits held by a CDG Host Account and unable to be distributed to a CDG Satellite Account will be retired after one year.
- Eligible projects will be guaranteed to receive compensation under the Phase One Value Stack for a term of 25 years. After 25 years, projects will be transitioned to the compensation system then in effect.
- The elements of the Phase One Value Stack will be posted in an addendum to the Authority’s Tariff as a “Statement of Value Stack Credits” and will be determined as follows:
 - **Energy** – Set at the wholesale market price for energy, using the day-ahead hourly locational-based marginal pricing (LBMP), inclusive of transmission losses, as reported by the New York Independent System Operator (NYISO).
 - **Capacity** – Compensation for capacity based on NYISO market capacity costs. For intermittent resources,¹² the customer may choose compensation by one of three alternatives:
 - Alternative 1 (default) – an average rate paid per kilowatt-hour on electricity exported to the grid during all hours of the year
 - Alternative 2 – a higher rate paid per kilowatt-hour, but only on electricity exported to the grid during 460 peak summer hours (2-7PM, June-Aug)
 - Alternative 3 – a payment per kilowatt based on the project’s kW output during the 10 highest hours of system peak demand during the prior year
 - **Environmental benefits (“Value of E”)** – **The greater of (i) the New York State Energy Research and Development Authority (“NYSERDA”) posted Tier 1 renewable energy credit (“REC”) price or (ii) the social cost of carbon, as of the operational date for the Customer-generator. The rate is paid only to projects that sell their RECs to LIPA and is locked in for 25 years.**

¹² **Dispatchable projects** – The capacity payments of a dispatchable project will be based on the Customer-generator’s net exports to the grid at the time of the peak recorded for Long Island (Zone K) during the previous NYISO Capability Year multiplied by the NYISO Monthly Spot Market Capacity Price.

- **Avoided demand (“D” or “DRV”)** – Based on the value of reducing the distribution grid’s peak load.
 - The DRV will be calculated for each customer service classification using the Authority’s most recent marginal cost of service study. The DRV may reflect a de-averaging of the system average marginal cost based on the number of megawatts subject to the LSRV. This rate is locked in for 3 years.
 - DRV compensation will be calculated by multiplying an eligible Customer- generator’s Capacity Value by the DRV in effect during the billing period of the current calendar year.

- **Locational system relief value (“LSRV”)**
 - The LSRV is a location-specific supplement to the DRV based on additional avoided costs at particular locations on the Authority’s system.
 - Initially, the LSRV in all eligible areas will be set at 50% of the DRV value in effect as of the operational date of the Customer-generator. The LSRV compensation credit will be calculated by multiplying Customer- generator’s Capacity Value by the LSRV in effect as of the operational date of the Customer-generator.
 - The LSRV compensation credit will be fixed for the first ten years of the Customer-generator’s participation in the Phase One Value Stack, after which time the LSRV will be reset to the then-applicable LSRV at that location, if any, for an additional 10-year term.
 - The LSRV will be available to projects located in eligible LSRV locations identified on the Authority’s website in a Tariff “Statement of Locational System Relief Value Areas”.

- **CDG Transition Credit** – Beginning on the earlier of (i) date the total capacity of NEM and CDG projects interconnected after January 1, 2018 reaches 94 megawatts; and (ii) January 1, 2020, newly applying mass market participants in CDG projects will be compensated under the Phase One Value Stack except that a CDG Transition Credit will replace the DRV. The CDG Transition Credit will be calculated in consultation with the staff of the Department of Public Service with the intention of replicating the “Market Transition Credit” in the PSC Value of DER Order. The CDG Transition Credit will be posted on the Authority’s website in the Statement of Value Stack Credits sufficiently in advance of the 94-megawatt trigger being reached to provide notice to any potentially affected project under development.

Background and Proposed Action – Undergrounding

On September 26, 2017, the Board of Trustees approved a policy on Evaluation of Underground Facilities and Public Outreach Prior to Construction of Major Projects (the “Undergrounding Policy”). The Undergrounding Policy outlines the criteria to be considered by the Authority to determine whether and the extent to which underground construction of all or a portion of a project is appropriate, consistent with state-wide standards. If a municipality seeks a *greater* portion of the project undergrounded, the municipality will now have the option to request underground construction be performed by the Authority at the municipality’s expense. This proposal will provide a financing mechanism to allow local communities to pay for the additional cost of undergrounding all or a portion of a project.

LIPA staff proposes an addition to the Tariff to address the charges to participating municipalities when incremental underground construction is requested. When incremental underground construction is requested, the requesting party (an affected city, county, town, or incorporated village) will have the option of paying the full incremental cost in advance of construction or in the form of an incremental energy charge on its designated residents’ utility bills for a period of 20 years.

If the latter approach is chosen, the incremental revenue requirement will include incremental costs expressed on a levelized annual basis. The incremental revenue requirement will be divided by the forecasted annual energy sales to the applicable accounts that are within the designated boundary to identify an incremental charge adder that will be charged to the designated customers until the total incremental cost of the project, including LIPA’s weighted average cost of capital, has been recovered.

Background and Proposed Action – Remote Meter Reading

The Authority and PSEG Long Island have planned a full deployment of AMI to improve customer satisfaction, increase energy efficiency, drive operational excellence, and reduce the cost of service, all which align with the goals of REV. The deployment of AMI system wide is being proposed to be complete by the end of 2022.

The Authority’s Tariff currently includes specific charges related to the installation and reading of remote meters. As AMI will become the standard for all customers going forward and can be read remotely at no incremental cost, the Authority will no longer need to recover additional fees for these types of meter services. Accordingly, this proposal eliminates one-time installation charges and daily administration and communication charges to customers who have requested the hourly metering technology.

In addition, data from the AMI meters will be accessible by customers on the PSEG Long Island website at no charge. However, any Energy Service Company (“ESCO”) who request the AMI data be sent to them (as opposed to retrieved from the PSEG website) on a regular basis will have to enter into a negotiated pricing plan for that service, as is required under the existing tariff. This is consistent with the concept developed New York’s Reforming the Energy Vision of data mining and production as a value-added service for modern utilities.

Financial and Customer Impacts

VDER. The VDER Tariff proposal is not expected to have a material financial impact on the Authority or its customers. Existing net metering customers will not be affected because they will be grandfathered under the current net metering rules.

Of the approximately 6,000 new net metering applications received per year by the Authority, fewer than 130 applications (approximately 2%) will be subject to the Value Stack compensation framework.¹³

The Authority has estimated the future impacts of the VDER Tariff based on new customer applications¹⁴ and expects to experience increased delivery revenues, net of payments to customer- generators, of approximately \$184,000 per year as a result of certain large commercial customers being eligible for the Phase One Value Stack rather than Net Energy Metering. However, staff expects these additional revenues to be offset by increased operating costs consisting of the addition of approximately 2.5 full-time equivalent employees needed to maintain the customer records and manually bill Phase One Value Stack customers as proposed.

Municipal Undergrounding. The Underground Tariff proposal will have no measurable impact the Authority or on customers outside the municipality electing to use the Tariff, as the charge is designed to recover all the incremental costs from the participants, plus interest calculated at LIPA's weighted average cost of capital.

Remote Meter Reading. The Remote Meter Charges proposal will not result in a material loss of revenues. Currently there are about 8 customers being charged remote meter reading charges. The loss of revenue is estimated to be \$511 per year and is more than offset by the operational savings associated with the AMI rollout.

Public, Stakeholder, and Department of Public Service Input

Public hearings were held on all three Tariff proposals on November 27th, 2017 in Nassau and Suffolk Counties, and written comments were accepted through December 8th, 2017. In addition, the Authority and PSEG Long Island met with and received input from representatives of the local solar industry on several occasions to discuss the VDER Tariff proposal.

¹³ Based on recent levels of participation, the Authority expects to receive approximately 100 applications per year for participation in the Phase One Value of DER from demand-metered commercial customers, six applications per year from community distributed generation projects (each to include a projected one to three commercial demand-metered satellite accounts), and five to ten applications from remote net metering hosts.

The Authority currently has one interconnected community distributed generation project and has received one other new application that is expected to result in a community distributed generation project being interconnected before the effective date of this tariff proposal. As of the date of publication, there are approximately 35 remote net metering hosts. These existing customers will not be affected by this proposal.

¹⁴ See previous footnote.

Valuable input was received from community stakeholders, members of the public, and the staff of the New York Department of Public Service on the VDER Tariff proposal. This input is summarized below and has been provided to the Board in full. A common theme among public commenters was that impact on the solar industry should be carefully considered and efforts should be made to educate the solar industry regarding the potential effects and to minimize any potential negative impact. The theme of the Department of Public Service comments was that the proposal should be made as consistent as possible with the PSC VDER Order to ensure that the State's treatment of DERs is uniform and predictable.

In response to community and DPS input received, the Authority has recommended changes to its original VDER proposal for purposes of (1) assisting the local solar development community in understanding and adapting to the proposed changes; and (2) making the proposal even more consistent with the framework adopted by the rest of the State in the PSC's Value of DER Order.¹⁵

The DPS commented in support of the Undergrounding Tariff and recommended that the incremental undergrounding charges be recovered on a per kilowatt-hour basis instead of a per customer basis as originally proposed. The recommended change has been made.

The DPS commented in support of the Remote Meter Reading Tariff proposal.

No comments were received from members of the public on the Undergrounding or Remote Meter Reading Tariffs.

Summary of Changes made in Response to Comments on VDER Tariff:

The following changes were made in response to input received from the public, community and industry stakeholder, and the Department of Public Service.

- **Increased Grandfathering Eligibility and More Resources for Solar Developers and Customers.** We have increased the length of the grandfathering eligibility period for demand-metered commercial and remote net metering customers by an additional four months, to April 30, 2018, during which time the Authority will: (1) in consultation with NYSERDA, make available a forecasting model for solar developers and customers to estimate future value stack payments (the "NYSERDA Value Stack Calculator"), which will be available in early 2018; (2) schedule trainings for developers and customers in using the calculator, and (3) streamline our process for providing historical customer usage data to installers. We have also increased

¹⁵ Most of the differences between the original proposal and the PSC Order have been resolved. Two differences remain. The main difference is the treatment of mass market (residential and small commercial) community net metering customers. The Authority proposes to net meter these customers for 20 years if they sign up by the earlier to occur of (a) January 1, 2020; or (b) 94MW of new NEM and CDG capacity being installed. The PSC puts these customers on value stacks plus a market transition credit. The second difference is in customer Alternative 3 for capacity payments. The Authority's Alternative 3 is based on the project's performance during the top 10 peak hours of the prior year instead of the single peak hour of the prior year. Authority staff will work with the DPS staff to bring the Authority's VDER Tariff into closer alignment with the PSC's VDER orders in subsequent phases.

eligibility for grandfathering to allow projects for which a complete application has been submitted.

- **25-year Value Stack Guarantee** – We have revised the length of time during which a project is guaranteed to receive the value stack compensation framework from 20 to 25 years, consistent with the PSC VDER Order.
- **Longer and More Robust Environmental Crediting** – We have revised the length of time during which the Value of E is locked in from 20 to 25 years, consistent with the PSC VDER Order. We have also committed to obtain changes in REC banking rules that will permit the Authority to bank excess RECs in sufficient quantities to eliminate the need to discount the NYSEERDA Tier 1 REC value to reflect unused RECs, when calculating the Value of E.
- **More Customer Choices for Capacity Compensation** – We have revised the capacity value component to include three alternative valuation methodologies for intermittent resources, consistent with the VDER order.
- **CDG Transition Credit** – We have revised the proposal to state that we will begin compensating new mass market CDG customers under the Value Stack framework, plus a CDG Transition Credit in place of the DRV, upon the earlier of (a) January 1, 2020; and (b) 94 megawatts of new NEM and CDG projects being interconnected.

Summary of Comments Received from the Department of Public Service on VDER Proposal

The DPS has reviewed and is supportive of the VDER proposal (see attached letter of recommendation). The DPS also provided advice and assistance throughout the notice and comment period. The DPS recommended improvements intended to make the proposal more consistent with the statewide approach, which are reflected in the revised proposal as described above.

In its letter of recommendation, the DPS indicated its support for the Authority's efforts to transition Long Island to be more aligned with the State's VDER policy. The DPS recommended that the Authority continue to work with DPS technical staff to ensure that the Authority's policies for compensating DERs are consistent with the State's, taking into account particular circumstances on Long Island. The DPS also noted the usefulness of the NYSEERDA VDER calculator and recommended that the Authority create a pricing calculator that can be used by developers to demonstrate potential customer savings, and recommend that the Authority continue to work with solar installers on provision of data and assistance understanding the value stack formulas and calculations.

Summary of Public Comments on VDER Proposal

The public hearings were well attended by solar installers and other community stakeholders, and several written comments were received.

Several comments and concerns were shared among more than one commenter. We have categorized and summarized these comments below and, in Table 1 below, have identified which comments were made by each speaker.

In addition, the Long Island Solar Energy Industry Association submitted comments on behalf of its seven board members, 20 member companies, and 11 other community-based organizations and companies. The LISEIA comments, which have been provided to the Board of Trustees, stated that although the solar community is supportive of migrating to a more dynamic pricing system for solar and consumption, the original Tariff proposal was not supportable as written.

The Authority has since worked together with LISEIA and other commenters to address their comments as discussed herein. LISEIA and its members are now supportive of the proposal as amended and have withdrawn their opposition. This support of the amended proposal is indicated in Table 1 below.

Guide to categorized comments, by submitter

	Overly complex / difficult to estimate	Moving too fast	Insufficient data available	Values too low	Indicated support of amended proposal
LISEIA and community organizations	x	x	x	x	Y
Charles DiStefano, LISEIA	x	x	x		Y
Bill Feldmann, LISEIA	x			x	Y
Jack Kulka, The Kulka Group	x	x		x	
Mike Bailis, SUNation Solar	x		x		
Scott Maskin, SUNation Solar	x	x			
Joseph Milillo, LISEIA		x		x	Y
Dennis Phayre, LISEIA	x			x	Y
Adrienne Esposito, Citizens Campaign	x		x	x	Y
Charles Schwartz, Green LI	x	x			Y
Arthur Perri, CED Greentech		x			Y
Ron Tergesen, Gexpro	x	x			
David Schieren, EmPower Solar	x	x	x		Y
Tara Bono, EmPower Solar	x	x	x		Y
Neal Lewis, Sustainability Institute of Molloy College	x	x			Y
Ronnie Mandler, Best Energy Power	x		x	x	Y
Sammy Chu, Edgewise Energy	x	x	x	x	Y
Billii Roberti, Green Choices Consulting	x				
Eric Alexander, Vision Long Island	x	x	x		Y
Jay Schneiderman, Town of Southampton	x	x	x	x	Y
Matthew Cohen, Esq., Long Island Association	x	x	x	x	Y
Kyle Strober, Association for a Better Long Island	x	x	x	x	Y
Gordian Raacke, Renewable Energy Long Island	x	x	x	x	Y
Sisters of St. Joseph	x	x	x	x	Y

- **Comment:** The original VDER proposal was overly complex, harmful to Long Island businesses, and difficult to market to potential customers. Several commenters spoke about the complexity of the original proposal, finding it difficult to understand, difficult to estimate future payment amounts, and difficult to explain to potential customers when marketing solar installations. As a result, these commenters said the original proposal would negatively impact solar installation businesses on Long Island and therefore cause job losses within the industry.

In addition, these commenters pointed out that because the value components in the original proposal were difficult to predict and subject to fluctuation, it would be more challenging for solar installers and customers to obtain financing for projects. They predicted that this would lead to lower growth of the solar market on Long Island.

These commenters said that more tools should be made available for solar installers to review and understand the value stack calculations and to estimate future value stack payments. They pointed out that NYSERDA made a “value stack calculator” available that made it possible for solar installers and customers to estimate value stack payments for projects interconnected with other utilities in New York, and that no similar tool is available for the Authority’s service territory. A few commenters noted that the NYSERDA value stack calculator could be improved upon.

Authority staff response: In response, the Authority staff has recommended several modifications to the original proposal in response to the public and DPS input with the intent of assisting the local solar development community in understanding and adapting to the proposed changes.

- **First,** to assist solar installers in better understanding and estimating the value stack components, the Authority has engaged NYSERDA to create a “value stack calculator” for Long Island that will allow solar installers and customers to easily estimate value stack payments for specific customers. NYSERDA expects to complete work on the calculator by early 2018, before new customers begin to be compensated under the value stack framework.
- **Second,** the Authority staff has delayed the date on which certain new customers will begin receiving compensation under the value stack framework from January 1, 2018 to April 30, 2018. This will provide solar installers with additional time to understand the new compensation system and educate their employees and customers.
- **Third,** the Authority’s service provider, PSEG Long Island, has committed to schedule training sessions to assist solar installers and customers with understanding the value stack framework and practice using the new value stack calculator.
- **Fourth,** to improve the ability of solar installers and customers to estimate value stack payments, PSEG Long Island has committed (a) to streamline its processes for providing customer usage data, (b) to review its capability to provide hourly

interval usage data, (c) to provide access to the formulas and calculations used in the value stack, and (d) to provide regular reporting on the number of solar installations.

- **Fifth**, to make the new value stack compensation more predictable and limit undue fluctuation, the Authority has lengthened the period during which a project is guaranteed to receive value stack payments from 20 to 25 years and lengthened the period during which the Value of E credit is fixed from 20 to 25 years.
- **Sixth**, to limit any impact on projects already in early stages of development, in addition to delaying implementation as described above, Authority staff recommends making NEM grandfathering available to projects in earlier stages of development. Specifically, staff recommends grandfathering projects that have submitted complete applications (as defined in Exhibit F of the PSEG Long Island SGIP).

The Authority staff believes the above changes listed above will address these comments. In addition, Authority staff notes the following:

- VDER represents the result of a collaborative statewide public process. The PSC’s VDER Order was the result of a lengthy public collaborative process involving numerous stakeholders including representatives from utilities, customers, solar installers, public policy experts, and environmental groups. It represents the culmination of two years of hard work and compromise. The Authority has monitored the statewide collaborative process closely and believes the product to be a fair and reasonable approach to beginning the State’s transition to a more accurate system for compensating DERs. In addition, all stakeholders and customer would be well served by a consistent and uniform DER compensation policy throughout the entire State—that is why the Authority has sought to limit any differences between its Tariff proposal and the statewide approach.
- The Authority’s VDER proposal affects a small share of the Long Island solar market. As noted above, of the approximately 6,000 applications received by the Authority per year for solar projects, only 130 are from projects that will be compensated under the VDER framework under this proposal. By conducting a limited rollout of the new framework to a small share of the market, the proposal allows the Authority to test the new system while limiting any impact on the solar development market.
- Solar developers have many alternatives on Long Island. In addition to net metering and VDER, solar developers on Long Island have other opportunities available to them. LIPA has issued two requests for proposals (“RFPs”) for utility-scale renewables and four feed-in tariffs (“FITs”) for commercial rooftop solar and fuel cells, resulting in 210-275 megawatts of solar and fuel cell projects and 90 megawatts of offshore wind. The utility-scale RFPs and FITs are alternative programs to NEM, VDER, and CDG that target similar project sites, technologies, and developers, and have been successful in the Long Island service territory.

- **Comment:** The original VDER proposal was too sudden, did not allow enough time for installers to adapt to changes, and VDER is premature without more dynamic retail pricing. Several commenters expressed support for transitioning to a successor to net metering but said that the changes were happening too fast.

These commenters said that the original proposal did not give them enough time to adapt to the VDER compensation system. In particular, these commenters were concerned that projects in early stages of marketing and development could be negatively affected if those projects are not interconnected by the time the proposal is implemented and thus do not qualify for grandfathering under net metering. These commenters also said that insufficient time was made available for them to understand the value stack calculations and educate their salespeople.

In addition, some of these commenters said that it was premature to introduce time and location based compensation (i.e. dynamic pricing) for solar before introducing time and location based pricing for retail consumption by customers. These commenters pointed out that California requires new solar customers to sign up for a time-based rate.

Authority staff response: In response to this comment, the Authority staff has modified the proposal to delay implementation of the value stack compensation system to April 30, 2018. This provides an additional four months for solar installers to become familiar with the new compensation system and educate employees and potential new customers. In addition, solar installers may use the delay to finish closing any deals that are currently in process. Authority staff has also recommended expanding grandfathering eligibility to include demand-metered commercial projects for which PSEG Long Island has received a complete application (as defined in Exhibit F of the PSEG Long Island SGIP) by April 30, 2018 (rather than requiring such projects to be substantially interconnected). This will ensure that deals struck under the existing compensation framework will not be disrupted by the proposal.

In addition, Authority staff notes that in addition to the Authority's standard notice and comment period of approximately two months, VDER has been publicly examined and debated for nearly two years in the statewide collaborative process, and representatives of the solar developer community have been closely involved throughout.

Finally, regarding the comment that time and location based compensation should be timed in sync with time and location based retail pricing, Authority staff notes that the Authority periodically reviews and updates as necessary its time and location based retail pricing options. Time-based pricing options are available to all Authority customers. Many of the small groups of customers affected by the proposal are already on time-based pricing, and all of the largest commercial customers (Rate 285) are on mandatory time-based pricing. The Authority occasionally offers location-specific rebates to customers who are willing to reduce their electricity usage during times of peak demand.

- **Comment:** Insufficient data and information have been made available to solar installers and customers. Several commenters expressed a concern that formulas and calculations for determining value stack amounts were not made available or were not provided with enough time for ample review. In addition, these commenters stated that more historical customer usage data is needed for them to be able to estimate their customer's future value stack payment amounts.

Authority staff response: As discussed above, PSEG Long Island has committed (a) to streamline its processes for providing customer usage data, (b) to review its capability to provide hourly interval usage data, (c) to provide access to the formulas and calculations used in the value stack, and (d) to provide regular reporting on the number of solar installations. Staff has also modified the proposal to provide an additional four months for solar installers to review and process this information.

In addition, staff notes that the Authority and PSEG Long Island have announced a rollout of smart meters to all customers, which will produce hourly interval usage data. Nearly all the largest customer class affected by the proposal (Rate 285 customers) already have smart meters, and PSEG Long Island has committed to prioritize the remaining customers affected by the proposal (Rate 281 customers and remote net metering customers). The Authority and PSEG Long Island's smart metering program is proceeding as or more quickly than the rest of the State's utilities.

- **Comment:** Value stack compensation too low. A few commenters stated that compensation for certain components of the value stack was too low in the original proposal. In particular, these commenters believed the Value of Environmental should not be compensated at the Authority's levelized cost of renewable energy credits because this methodology could result in a payment that is lower than the true value to the environment of the customer's production. Commenters also noted that the originally proposed method for valuing capacity could result in payments that were lower or less certain than the capacity valuation methodology proposed by the PSC.

Authority staff response: As discussed in greater detail above, the Authority has committed to obtain more favorable REC banking rules that would enable it to pay the higher of the full Tier 1 REC value for Environmental or the Social Cost of Carbon, consistent with the PSC. In addition, the Authority has modified its proposal to add two more customer alternatives for calculating capacity values, similar to those offered by the PSC. We have also extended the period during which value stack compensation is guaranteed from 20 years to 25 years. We believe these changes adequately address the public comments received.

Individual Comments

Comments that did not fall into any of the summary categories above are addressed here.

- **Monica Lamb, LO3 Energy Inc.** LO3 Energy Inc. is an energy technology company that uses blockchain technology to enable an interactive, multi-sided marketplace that allows

consumers, producers, and utilities to deploy and manage energy assets and activate an internet of things within the local power grid.

LO3 commented in support of the proposal, describing the proposed Tariff changes as “a crucial step toward implementing these markets, and a first step in establishing accurate price signals that will drive even greater efficiency and intelligence in the functioning of the electric grid.” In addition, LO3 commented that it appreciates LIPA’s efforts “to modernize the power grid consistent with New York State’s initiatives to reform the energy future.”

LO3 recommended several modifications to the original proposal: (1) adopting the PSC’s Value of E (the higher of the Social Cost of Carbon and the full Tier 1 REC price); (2) updating the Demand Reduction Value every three years instead of every 5 years, as originally proposed, arguing that more frequent value determinations will improve the accuracy of the price signal in driving appropriate investments in DERs; and (3) adopting alternative methods for calculating the capacity element of the value stack.

Authority staff response: Staff has made the changes suggested by LO3.

- **Angela Schorr, Direct Energy.** Direct Energy recommended a modification to the original proposal to allow grandfathering of customers who have already signed an interconnection agreement by January 1, 2018 (but who might not have yet been interconnected by that date). Direct Energy has been working with some customers who are in the process of completing projects, but have not specifically been interconnected yet. Direct Energy commented that these customers should be included in the net metering grandfathering since they have begun building projects based upon existing rules.

Authority staff response: Staff has made the changes suggested by Direct Energy.

- **Susanne DesRoches, Mayor’s Office of Sustainability, City of New York.** The City of New York commented that it supports measures like the Value Stack mechanism that can provide more robust compensation for DER projects, particularly in areas where they can help to relieve grid strain or address public policy priorities such as energy affordability, air quality, and heat vulnerability, among other dimensions. The City recommended the following modifications to the original proposal to harmonize it with the rest of the state’s VDER compensation:
 - Changing the Value of E (to the higher of the Tier 1 REC Value and the social cost of carbon) and clarifying that it will only be paid to eligible technologies that generate RECs;
 - Clarifying that mass market customers who participate as satellites in CDG projects will be compensated under the value stack plus MTC system after January 1, 2020;
 - Guaranteeing value stack compensation for 25 years (rather than 20 years);
 - Updating the DRV every three years rather than five years.

Authority staff response: Staff has made the changes suggested by the City of New York and commits to working with DPS to establish a CDG Transition Credit that is consistent with the MTC.

In response to the DPS's and others' comments, the Authority made several changes to make the Authority's VDER Tariff proposal even more consistent with the PSC VDER Order, including increasing the period during which a customer's value stack compensation is locked in, adopting the DPS's recommended Value of E, and committing to make available a value stack calculator and training sessions to educate customers and solar installers. The Authority will continue to work with the DPS staff to closely align the Authority's compensation for DER with statewide policy in subsequent phases.

Recommendation:

For the foregoing reasons, I recommend that the Trustees approve the modifications to the Tariff for Electric Service described herein and set forth in the accompanying resolutions.

After questions and a discussion by the Trustees and the opportunity for the public to be heard, Trustee Greenfield made a motion, which was duly seconded, to extend the implementation date for VDER until July 1, 2018. That motion failed. Trustee Cohen then made a motion, which was duly seconded and passed, to keep the May 1, 2018 implementation date, but for Staff to include a progress report to the Board at its regularly scheduled meeting in March 2018, in accordance with the following resolution:

1391. APPROVAL OF MODIFICATIONS TO LIPA'S TARIFF FOR ELECTRIC SERVICE RELATED TO THE VALUE OF DISTRIBUTED ENERGY RESOURCES

WHEREAS, pursuant to the Tariff for Electric Service ("Tariff") of the Long Island Power Authority (the "Authority"), applicable laws and regulations, and New York State policy, the Authority compensates customers who export energy to the Authority's electric grid; and

WHEREAS, the New York Public Service Commission ("NYPSC") has determined that the existing system for compensating customers for energy exports, net energy metering, needs to be revisited and updated in light of the increasing levels of penetration of distributed energy resources on the electric grid to more fairly and accurately value distributed energy resources; and

WHEREAS, the NYPSC has established guidance on the fair and accurate valuation of distributed energy resources in its *Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters*, which the Authority intends to implement; and

WHEREAS, the Department of Public Service is supportive of this proposal; and

WHEREAS, following the issuance of public notice in the State Register on October 18, 2017, two public hearings were held in Nassau and Suffolk counties on November 27, 2017, the comments were addressed, and the public comment period has since expired;

NOW, THEREFORE, BE IT RESOLVED, that for the reasons set forth herein and in the accompanying Memorandum, the proposed modifications to the Authority’s Tariff are hereby adopted and approved to be effective January 1, 2018; and be it further

RESOLVED, that the Chief Executive Officer and his designees are authorized to carry out all actions deemed necessary or convenient to implement this Tariff; and be it further

RESOLVED, that the Tariff amendments reflected in the attached redlined Tariff leaves are approved; and be it further

RESOLVED, that the Authority’s Staff shall present to the Board, at its regularly scheduled meeting in March 2018, a review and assessment of the timely implementation and adequacy of the information publicly available relating to the calculation of the Value Stack, as described in the accompanying Memorandum.

Requested Action:

The Long Island Power Authority (the “Authority”) staff (“Staff”) proposes to modify the Authority’s Tariff for Electric Service (the “Tariff”) effective January 1, 2018 to reflect, as appropriate, the New York Public Service Commission (the “Commission”)’s *Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters* (the “VDER Order”)¹.

The Authority continues to pursue New York State’s clean energy goals and the development of Distributed Energy Resources (“DER”). The VDER Order begins a transition from the existing framework for compensating DER—known as net energy metering—to a value-based compensation framework that will benefit all customers by improving the efficiency of the electric system while continuing to support the sustainable development of clean generation necessary to meet the goals of the Reforming the Energy Vision (“REV”)² initiative and the Clean Energy Standard.³

¹ Case 15-E-0751 et al., *In the Matter of the Value of Distributed Energy Resources* (“VDER Proceeding”), Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters (issued March 9, 2017).

² Case 14-M-0101, *Reforming the Energy Vision, Order Adopting Regulatory Policy Framework and Implementation Plan* (issued February 26, 2016) (REV Framework Order or Track One Order); *Order Adopting a Ratemaking and Utility Revenue Model Policy Framework* (issued May 19, 2016) (Track Two Order).

³ Case 15-E-0302, *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard*, Order Adopting a Clean Energy Standard (issued August 1, 2016) (“CES Order”).

Customers currently receiving net energy metering will not be affected by this change. In addition, residential and small commercial customers who add solar (or other DERs) by January 1, 2020, will continue to receive compensation equivalent to net energy metering for 20 years.

Additionally, Staff proposes to update the Community Distributed Generation (“CDG”) provisions of the Tariff, consistent with Commission orders,⁴ to extend eligibility to CDG hosts with fewer than 10 enrolled CDG satellite accounts where the CDG project is located on the site of a multi- unit dwelling.

Background:

Net Energy Metering. “Net Energy Metering”—the existing VDER compensation framework—allows electric customers who own an eligible electricity generation system to offset their electric utility bill on a volumetric basis with the electricity generated by the customer’s system. New York’s original net-metering statute applied only to residential solar (PV) systems. Over the years, the law was expanded to include other forms of electric generation equipment including farm waste, wind, micro-hydro, fuel cell, and combined heat and power systems.

Net Energy Metering was initially subject to a rated generating capacity ceiling in each utility service territory equal to one (1%) percent of the 2005 electric demand for each utility. Subsequently, the Authority increased the ceiling to 3% and currently has waived any limitations or restrictions on the ceiling, consistent with statewide policy.⁵

Reforming the Energy Vision. In 2015, the Commission initiated the REV proceeding with a vision towards a complete reform of the state’s electric utility regulatory and pricing models. The REV initiative seeks to increase clean energy innovation, bringing new investments into New York and improving customer choice and affordability. As part of the REV proceeding, the Commission recognized the need for the development of a more accurate method of valuing distributed energy resources beyond traditional net metering in order to promote sustainable development of DERs and to incentivize DER development in areas where DERs offer the potential to improve system efficiency.

The VDER Order. On March 9, 2017, the Commission unanimously adopted the first phase of its VDER Order, which outlines a new framework for compensating solar and other distributed energy projects to better reflect the value and benefits provided to the grid by solar and other DERs while maintaining a smooth transition and grandfathering provisions to protect customers who had already made DER investments.

⁴ Case 15-E-0082, Order Modifying Community Distributed Generation Membership Requirements (issued March 13, 2017)

⁵ In addition to NEM, LIPA has issued two requests for proposals (“RFPs”) for utility-scale renewables and four feed-in tariffs (“FITs”) for commercial rooftop solar and fuel cells, resulting in 210-275 megawatts of solar and fuel cell projects and 90 megawatts of offshore wind. The utility-scale RFPs and FITs are alternative programs to NEM that target similar project sites, technologies, and developers, and have been successful in the Long Island service territory. LIPA will evaluate on an ongoing basis offering future RFPs and feed-in tariffs to meet its share of the state-wide 50 percent renewable by 2030 Clean Energy Standard.

The VDER Phase One Order provides as follows:

Grandfathering for existing DERs. All DER projects that were interconnected (with a Commission-regulated investor owned utility) prior to issuance of the March 9, 2017 Commission order and eligible for net energy metering will be grandfathered and will continue to be compensated through net energy metering as before for the life of the system.

Phase One NEM. Phase One NEM is identical to the existing NEM framework except that

- Phase One NEM is subject to a 20-year sunset and (ii) unused credits roll forward for 20 years under Phase One NEM instead of being cashed out annually.

In the Commission's Order, Phase One NEM was offered to two groups of customers:

- Mass market customers (residential and small commercial) interconnected by January 1, 2020; and
- Large demand customers (including remote net metering hosts, community distributed generation projects, and demand-metered commercial customers) interconnected or substantially financially committed within 90 days of the VDER Order (i.e. this offer expired on June 9, 2017).

Phase One Value Stack. The Phase One Value Stack is the first iteration of a new compensation framework based on summing the components of value of a particular DER to the grid, the utility, and the utility's other customers. The Phase One Value Stack tariff will apply to large demand customer-generators as of June 9, 2017. DERs subject to the Phase One Value Stack will receive monetary credit for net hourly electricity exported to the grid. Excess credit will be eligible for carry-over to subsequent billing for a term of 20 to 25 years depending on project type.

The Phase One Value Stack for net hourly electricity exported to the grid will be calculated based on the following values:

- Energy Value based on Day Ahead hourly zonal locational-based marginal price (LBMP).⁶
- Capacity Value based on retail capacity rate based on performance during the peak hour in the previous year.
- Environmental Value based on the higher of the Clean Energy Standard Tier 1 Renewable Energy Credit ("REC") price or the Social Cost of Carbon ("SCC").

⁶ Capitalized terms not defined herein are defined by reference to the VDER Order.

- **Demand Reduction Value (“DRV”) and Locational System Relief Value (“LSRV”) based on de-averaging of utility marginal cost of service studies.**

Community distributed generation and remote net metered projects, and large on-site commercial demand-metered systems will be compensated under the Value Stack tariff.

Under Phase One of the VDER Order, energy storage projects combined with eligible net metering technologies will qualify for compensation. Customer-generator injections into the grid, and withdrawals from the grid, will be measured and priced on the basis of the combined performance of the customer-side generation and storage systems combined.

Proposal:

Staff proposes to modify the Tariff to implement Phase One of the VDER Order as appropriate for the Authority’s service territory, within a time frame that would commence on January 1, 2018 and contain the same grandfathering provisions. Staff proposes the following specific changes to the Authority’s Tariff in order to implement Phase One of the VDER Order:

Grandfathering of Existing Net Energy Metering

Existing Net Energy Metering customers and eligible customers interconnected or substantially interconnected by January 1, 2018 will be grandfathered and remain on existing NEM rules for the life of the customer’s system.⁷

Phase One Net Energy Metering (NEM)

Mass market customer-generators who become substantially interconnected after January 1, 2018 and by January 1, 2020⁸ and mass market customers who participate as satellites in community distributed generation projects that become substantially interconnected after January 1, 2018 and by January 1, 2020 will be eligible for Phase One NEM. Phase One NEM is identical to the existing NEM framework, *except* that:

⁷ Substantial interconnection will be determined by reference to the PSEG Long Island Smart Grid Small Generator Standardized Interconnection Procedures (“Smart Grid SGIP”). Systems in the Smart Grid SGIP Fast Track process will be considered substantially interconnected upon completion of Step 6 of the Fast Track process. Systems sized between 50 kW and 2,000 kW will be considered substantially interconnected upon completion of Step 7 of the Smart Grid SGIP. (Systems larger than 2,000 kW will continue to be ineligible for net metering.)

⁸ The Commission has indicated that it will issue a Phase Two VDER Order to go into effect on January 1, 2020. The Authority intends to implement Phase Two on January 1, 2020, or as soon thereafter as reasonably practicable in light of administrative rulemaking procedures applicable to the Authority.

- **Phase One NEM is subject to a 20-year sunset, after which time the customer will be moved to the compensation system then in effect;**
- **Unused credits will roll over to next billing period for the full 20-years (instead of being cashed out annually); and**
- **Any credits remaining after the twentieth year will be forfeited.**

Phase One Value Stack for Large Demand-Metered Customers

Large demand-metered commercial customers that become substantially interconnected after January 1, 2018, and large demand-metered commercial customers who participate as satellites in community distributed generation projects that become substantially interconnected after January 1, 2018; and remote net metering hosts that become substantially interconnected after January 1, 2018 will be compensated using the Phase One Value Stack.

- **Participants will receive monetary credits (as opposed to volumetric) for excess generation in any hour according to the Phase One Value Stack described below.**
- **Unused credits will roll over to next billing period, except that credits held by a CDG Host Account and unable to be distributed to a CDG Satellite Account will be retired after one year.**
- **Eligible projects will be guaranteed to receive compensation under the Phase One Value Stack for a term of 20 years. After 20 years, projects will be transitioned to the compensation system then in effect.**
- **The elements of the Phase One Value Stack will be compensated as follows:**
 - **Energy value** – Net energy exports onto the Authority’s system by a Customer-generator in any hour be credited based on the NYISO day-head Locational Based Marginal price for Zone K.
 - **Capacity value** – Capacity will be credited based on the participating project’s “Capacity Value” multiplied by the applicable price for capacity.⁹

⁹ This methodology differs slightly from the Commission’s VDER Phase One Order because the Authority—unlike the regulated utilities—currently does not have a mandatory hourly pricing tariff and therefore does not have an existing market based demand rate. Accordingly, the Authority will value capacity at the Zone K market value of capacity.

Capacity Value (dispatchable projects) – The Capacity Value of a dispatchable project will be based on the Customer-generator’s annual Unforced Capacity (UCAP) during the previous NYISO Capability Year, which will be determined by measuring the Customer-generator’s net exports onto the Authority’s system at the time of the peak recorded for Long Island, Zone K.

Capacity Value (non-dispatchable projects) – The Capacity Value of a non-dispatchable project will be based on customer’s weighted average output during the top ten peak hours of the previous year.

Capacity credits (dispatchable projects) – Dispatchable projects will receive monthly capacity credits calculated as the Customer-generator’s Capacity Value multiplied by the current Monthly Spot Market Capacity Price.

Capacity credits (non-dispatchable projects) – Non-dispatchable projects will receive an Annual Capacity Payment Amount calculated as the Customer-generator’s Capacity Value multiplied by the previous year’s Annual Spot Market Capacity Price. Non-dispatchable projects will choose from among three available methods for allocating capacity credits based on the project’s Annual Capacity Payment Amount.¹⁰

- **Environmental value** – The environmental credit will be the lesser of (i) the NYSERDA posted Tier 1 REC price or (ii) the levelized Tier 1 REC value the Authority assigns based on its ability to monetize Tier 1 RECs, as of the operational date for the Customer-generator.

¹⁰ **Method One** - The capacity credit (\$) will be the Customer-generator's Annual Capacity Payment Amount divided by three and added to Value Stack Calculation Bill Credit posted to the Customer-generators account in three installments during the peak months of June, July and August.

Method Two - The capacity credit per (\$/kWh) will be calculated based on Customer-generator's Annual Capacity Payment Amount divided by the Customer-generator's previous summers net energy injections over the 460 hours of the peak months of June, July and August. The Capacity Component Credit \$/kWh will be applied to all energy net injects during the 460 designated summer hours during the peak months of June, July and August.

Method Three - The capacity credit per (\$/kWh) will be calculated based on Customer-generator's Annual Capacity Payment Amount divided by the Customer-generator's previous year’s net energy injections (8760 Hours). The Capacity Component Credit (\$/kWh) will be applied to all energy net injections.

- This methodology may differ from the Commission’s VDER Phase One Order if the Authority is unable to receive credit in the New York Generation Attribute Tracking System (“NYGATS”)¹¹ for all of the RECs it has purchased.
 - The environmental credit shall be fixed for the 20-year term of compensation for the Customer-generator.
- **Distributional value** – The value of distribution consists of a systemwide Demand Reduction Value (“DRV”) and a location-specific Locational System Relief Value (“LSRV”). The DRV and LSRV will be determined as follows:
- The DRV will be based on the avoided transmission and distribution cost to the utility per unit of demand reduction.
 - The DRV will be calculated for each customer service classification using the Authority’s most recent marginal cost of service study. The DRV may reflect a de-averaging of the system average marginal cost based on the number of megawatts subject to the LSRV.
 - The DRV will be posted in the “Statement of DRV” on the Authority’s website to be updated as needed and no less frequently than every five years.
 - DRV compensation will be calculated by multiplying an eligible Customer-generator’s Capacity Value by the DRV in effect during the billing period of the current calendar year.
 - The LSRV is a location-specific supplement to the DRV based on additional avoided costs at particular locations on the Authority’s system.
 - Initially, the LSRV in all eligible areas will be set at 50% of the DRV value in effect as of the operational date of the Customer-generator. The LSRV compensation credit will be calculated by multiplying Customer-generator’s Capacity Value by the LSRV in effect as of the operational date of the Customer-generator.
 - The LSRV compensation credit will be fixed for the first ten years of the Customer-generator’s participation in the Phase One Value Stack, after which time the LSRV will be reset to the then-applicable LSRV at that location, if any, for an additional 10-year term.

¹¹ NYGATS is an online certificate-tracking system that records information about electricity generated, imported, and consumed within New York State. NYGATS also serves as the platform for applying for Renewable Energy Standard (RES) certification under the New York’s Clean Energy Standard. NYGATS retains records of resources that have received a statement of qualification and designates the RECs created by a facility as eligible for RES Tier 1 compliance.

- The LSRV will be available to projects located in eligible LSRV locations identified by the Authority in the “Statement of LSRV Areas” which will be posted on the Authority’s website.

Financial Impacts:

This Tariff proposal is not expected to have a material financial impact on the Authority. Existing net metering customers will not be affected because they will be grandfathered under the current net metering rules.

The Authority has estimated the future impacts based on new customer applications¹² and expects to experience increased delivery revenues, net of payments to customer-generators, of approximately \$184,000 per year as a result of certain large commercial customers being eligible for the Phase One Value Stack rather than Net Energy Metering. However, Staff expects these additional revenues to be offset by increased operating costs consisting of the addition of approximately 2.5 full-time equivalent employees needed to maintain the customer records and manually bill Phase One Value Stack customers as proposed.

Proposed Tariff Changes:

1. Implement Phase One of Value of Distributed Energy Resources Order.

Affected Tariff Leaves: 1, 14, 15, 16, 17, 18, 19, 22, 24, 31, 34A, 34A-1, 34B, 34C, 34D, 34E, 34F, 34F-1, 34G, 34H, 34I, 34J, 34J-1, 34K, 34L, 34M, 34N, 34O, 34P, 34Q, 34R, 34S, 34T, 34U, 35, 38

Reason for Proposed Changes:

To implement the New York Public Service Commission’s Phase One Order on the Value of Distributed Energy Resources as appropriate for the Authority.

Summary of Proposed Changes:

In summary, the proposed changes to LIPA’s Tariff for Electric Service will grandfather existing NEM customers, extend NEM to mass market customers enrolling before 2020, and implementing the Phase One Value Stack for new demand-metered Distributed Energy Resources.

2. Update eligibility of Community Distributed Generation Membership Requirements.

Affected Tariff Leaves: 34L

¹² Based on recent levels of participation, the Authority expects to receive approximately 100 applications per year for participation in Phase One from large demand-metered commercial customers, one to two applications per year from community distributed generation projects, and five to ten applications from remote net metering hosts. The Authority currently does not have any interconnected community distributed generation projects, but has received and is processing one application that is expected to result in a community distributed generation project being interconnected before the effective date of this tariff proposal. As of the date of publication, there are approximately 35 remote net metering hosts. These existing customers will not be affected by this proposal.

After questions and a discussion by the Trustees and the opportunity for the public to be heard, upon motion duly made and seconded, the following resolution was passed by the Trustees.

1392. APPROVAL OF MODIFICATIONS TO LIPA'S TARIFF FOR ELECTRIC SERVICE RELATED TO MUNICIPAL UNDERGROUNDING

WHEREAS, the Board of Trustees of the Long Island Power Authority (the "Authority") has adopted an Undergrounding Policy which provides, in part, that if a municipality in the Authority's service territory seeks a greater portion of an infrastructure project undergrounded than would otherwise be warranted under the criteria set forth in the Authority's Undergrounding Policy, the municipality shall have the option to request additional underground construction be performed by the Authority at the municipality's expense; and

WHEREAS, the Authority determined in the Undergrounding Policy to provide an optional financing mechanism to allow local communities to pay for the additional cost of undergrounding all or a portion of a project through an incremental charge on designated customer bills; and

WHEREAS, the proposed modifications to the Authority's Tariff for Electric Service establish the optional financing mechanism provided for in the Authority's Undergrounding Policy; and WHEREAS, the Department of Public Service is supportive of this proposal; and

WHEREAS, following the issuance of public notice in the State Register on October 18, 2017, two public hearings were held in Nassau and Suffolk counties on November 27, 2017, no public comments were received, and the public comment period has since expired;

NOW, THEREFORE, BE IT RESOLVED, that for the reasons set forth herein and in the accompanying Memorandum, the proposed modifications to the Authority's Tariff are hereby adopted and approved to be effective January 1, 2018; and be it further

RESOLVED, that the Chief Executive Officer and his designees are authorized to carry out all actions deemed necessary or convenient to implement this Tariff; and be it further

RESOLVED, that the Tariff amendments reflected in the attached redlined Tariff leaves are approved.

Requested Action:

The Long Island Power Authority (“Authority”) Staff (“Staff”) proposes to modify the Tariff for Electric Service (“Tariff”) effective January 1, 2018 to provide for incremental undergrounding of transmission and distribution line construction at the request of a municipality.

Background:

On September 26, 2017, the Authority’s Board of Trustees approved a policy (the “Policy”) on “Evaluation of Underground Facilities and Public Outreach Prior to Construction of Major Projects”. That Policy outlines the criteria to be considered by the Authority to determine whether and the extent to which underground construction of all or a portion of a project is appropriate, consistent with state-wide standards. If a municipality seeks to have a *greater* portion of the project undergrounded, such municipality will now have the option to request additional underground construction be performed by the Authority at the municipality’s expense. The Policy further states that the Authority will maintain a special tariff provision for undergrounding to provide a financing mechanism to allow local communities to pay for the additional cost of undergrounding all or a portion of a project. The proposed modification to the Tariff described below implements the special tariff provision for undergrounding called for in the Policy.

Proposal:

LIPA Staff proposes an addition to the Tariff to address the charges to participating municipalities when incremental underground construction is requested. When incremental underground construction is requested, the Requesting Party (an affected city, county, town, or incorporated village) will have the option of paying the full incremental cost in advance of construction or the incremental revenue requirement associated with the request in the form of an incremental daily service charge for a period of 20 years. The proposed tariff language states how the incremental revenue requirement will be calculated, who will be responsible to pay, and where affected customers may obtain information on the incremental charge.

The requesting municipality will need to file a written request for incremental underground construction and appropriate municipal resolution, authorizing the Authority to impose and collect a charge on customer bills in the area designated by the municipality and within its municipal jurisdiction. The municipal resolution must include a finding that the proposed additional undergrounding is in the public interest.

The incremental revenue requirement will include incremental costs expressed on a levelized annual basis. The incremental revenue requirement will be divided by the number of applicable accounts that are within the designated boundary, and that annual amount will be divided by 365 to identify a daily service charge adder that will be charged to the applicable customers until the total incremental cost of the project, including LIPA’s weighted average cost of capital, has been recovered. The incremental charge will take effect

as soon as the project is placed into service and with a target amortization period of 20 years unless a shorter period is agreed upon.

The municipality is responsible for ensuring that all non-electrical overhead facilities collocated with the project will also be permanently relocated or placed underground. The Authority will not finance the cost of undergrounding or relocating the co-located nonelectric overhead facilities.

A “Statement of Undergrounding Charge” will be developed separately for each project. It is envisioned that different projects will be approved and implemented in different areas and at different times. Each project will be priced and tracked separately, so that obligations related to any one project will not be comingled with obligations from separate projects in different areas. Each Statement of Undergrounding Charge will be available at the Authority’s Business Offices. The Charge will be included on each applicable customer’s bill. The charge will not be subject to Late Payment Charges¹, but unpaid charges from customers will remain due from all other customers that participate in the project.

Financial Impacts:

There will be no measurable impact on the non-participating customer, as the charge is designed to recover all the incremental costs from the participants, plus interest calculated at LIPA’s weighted average cost of capital. The individual rate payer’s financial impact will vary based on the size of each undergrounding project and the number of applicable customers subject to the incremental charge.

Affected Tariff Leaves: 85, 86, and 87.

Summary of Proposed Changes:

In summary, the proposed changes to LIPA’s Tariff for Electric Service will add a section on Charges for Undergrounding Requests. The tariff leaves outline how a Request will be established, how the charge will be calculated and billed, and how a Statement of Undergrounding Charge can be obtained.

¹ In lieu of late payment charges, unpaid charges will continue to accrue financing charges at LIPA’s weighted average cost of capital until the amounts are paid by the customer, or written off for recovery from all other participants. The WACC is more appropriate index for the time value of money since LIPA’s general customer base will not bear the risk of write-offs for bad debt and no incremental collection efforts or costs will be incurred by the general customer.

After questions and a discussion by the Trustees and the opportunity for the public to be heard, upon motion duly made and seconded, the following resolution was passed by the Trustees.

1393. APPROVAL OF MODIFICATIONS TO LIPA'S TARIFF FOR ELECTRIC SERVICE RELATED TO REMOTE METER READING

WHEREAS, the Long Island Power Authority (the "Authority") and its Service Provider have announced plans to fully rollout smart meters to all customers; and

WHEREAS, the Tariff for Electric Service ("Tariff") of the Long Island Power Authority (the "Authority") currently contains charges for installation and reading of remote meters, which charges are no longer necessary or appropriate; and

WHEREAS, the Authority's staff has proposed eliminating these unnecessary remote meter reading charges; and

WHEREAS, the Department of Public Service is supportive of this proposal; and

WHEREAS, following the issuance of public notice in the State Register on October 18, 2017, two public hearings were held in Nassau and Suffolk counties on November 27, 2017, no public comments were received, and the public comment period has since expired;

NOW, THEREFORE, BE IT RESOLVED, that for the reasons set forth herein and in the accompanying Memorandum, the proposed modifications to the Authority's Tariff are hereby adopted and approved to be effective January 1, 2018; and be it further

RESOLVED, that the Chief Executive Officer and his designees are authorized to carry out all actions deemed necessary or convenient to implement this Tariff; and be it further

RESOLVED, that the Tariff amendments reflected in the attached redlined Tariff leaves are Approved.

The Chair stated that the next item on the agenda was the CFO's Report presented by Joseph Branca.

Mr. Branca presented the CFO Report and took questions from the Trustees.

The Chair stated the next item on the agenda was the PSEG Long Island Operating Report presented by Daniel Eichhorn and Dave Lyons.

Mr. Eichhorn and Mr. Lyons presented the PSEG Long Island Operating Report and took questions from the Trustees.

The Chair stated that the next item on the agenda was the consideration of Approval of the 2018 Budget.

After requesting a motion on the matter, which was seconded, the Chair indicated that there would be a brief presentation from Dan Eichhorn and his PSEGLI team, and the matter would then be presented by Joseph Branca.

Mr. Eichhorn and his team provided a brief presentation; Mr. Branca presented the following action item:

Requested Action

The Trustees are requested to adopt a Resolution (i) approving the proposed 2018 Operating and Capital Budgets (the “Budget”), consistent with the 2015 Rate Recommendation (as defined below), for the Long Island Power Authority and its subsidiary, the Long Island Lighting Company d/b/a LIPA (collectively the “Authority” or “LIPA”), which is attached hereto as Exhibit B and (ii) amending the 2017 Operating and Capital Budget, as described below and specified in Exhibit B.

Background on 2018 Operating and Capital Budgets

The proposed 2018 Budget sets forth the revenue, grant, other income, and expenditure forecasts for the year ending December 31, 2018, including the Operating and Capital Budgets submitted by PSEG Long Island in accordance with the Amended and Restated Operations Services Agreement (“OSA”).

The proposed 2018 Budget totals \$4.4 billion, including an Operating Budget of \$3.6 billion and a Capital Budget of \$757 million. The proposed 2018 Operating Budget funds delivery and power supply costs, taxes and debt service. The Capital Budget funds long-life infrastructure investments such as transmission, substations, poles and wires.

The proposed 2018 Budget includes rates and charges that are consistent with the Rate Recommendation (the “2015 Rate Recommendation”) of the Three-Year Rate Proposal for the Long Island Power Authority and its Service Provider, PSEG Long Island LLC provided by the Department of Public Service on September 28, 2015. The 2015 Rate Recommendation established the level of revenue used to budget expenditures for 2018, subject to certain specified updates based on actual experience and the latest available assumptions.

The proposed 2018 Budget is also consistent with the financial policy adopted by the Board of Trustees in December 2015 to reduce the Authority’s borrowing and interest cost and raise the Authority’s credit ratings over five years. That policy established a fixed obligation coverage target of 1.40x for LIPA fixed obligation payments for 2018. Staff projects that the 2018 Budget will achieve a coverage ratio of 1.39x in 2018. In addition, the Budget will meet the Board’s financial policy for borrowing, with new debt funding less than 64% of capital spending.

For 2018, staff projects LIPA will fund 57% of the \$757 million Capital Budget from debt issues inclusive of FEMA projects, achieving the Board’s fiscal goal. Excluding the \$171.2 million of FEMA financed projects, staff forecasts 72% would be financed with debt. The 2018 Capital Budget includes additional budget requests for regulatory and load growth driven projects of \$57.4 million and a deferral of certain specified 2017 capital projects totaling \$4.0 million into 2018.

The monthly electric bill for the average residential customer is projected to be \$158.61 in 2018, which is \$3.35, or 2% per month, above the 2017 budgeted level. The primary drivers of the increase are infrastructure investments, higher storm restoration costs, and lower sales partially offset by lower Power Supply Costs.

Allocation of Intra-Year Power Supply Capacity Costs

In December 2015, the Trustees approved a regulatory asset to affect the recovery of certain fixed generation capacity costs in the Power Supply Charge within each year. The effect is to collect from customers a greater share of these fixed generation capacity costs during the summer months when generation capacity is needed most rather than recovering these fixed costs equally through the year. Staff believes this more accurately reflects cost causation in electric rates. The December 2015 approval by the Trustees specified that the schedule of deferrals and amortization of such costs in future years would be presented in future budgets. There is no net impact on an annual basis from the reallocation of these costs within the year, with allocations by month from plus \$30 million to minus \$22.5 million, as shown in the table below.

	Reallocation of the Proposed Fixed Capacity Costs in the Power Supply
January	(\$22,500,000)
February	(\$22,500,000)
March	(\$10,000,000)
April	(\$10,000,000)
May	(\$5,000,000)
June	\$10,000,000
July	\$30,000,000
August	\$30,000,000
September	\$17,500,000
October	(\$5,000,000)
November	(\$5,000,000)
December	(\$7,500,000)
Annual	\$0 Million

Power Supply Charges are projected to decrease from \$1.993 billion in 2017 to \$1.877 billion in 2018 for a savings of \$116 million. The primary driver of the decline is lower projected commodity prices. In addition to the cost of fuels consumed in generation and purchased power, the Authority's share of costs charged by the ISOs, payments to ESCOs, Zero Emission Credits associated with the adoption by the NYS Public Service Commission of the Clean Energy Standard, as well as other agreements, hedging, and renewable energy costs are included in the Power Supply Charge.

Operating and Deferred Expense

Total operating and deferred expenses are expected to decline by \$2.9 million to \$751.6 million in 2018 from \$754.5 million in 2017. These expenses are primarily the costs associated with operating the T&D system. They consist of PSEG Long Island Operating Expenses, including: T&D, Customer Service, Power Markets, Renewable Energy programs and additional costs in 2018 associated with Utility 2.0, which costs must remain within 102% of budget for PSEG Long Island to receive incentive compensation. Also included are Managed Expenses, which are managed by PSEG Long Island, but not within their control. These include storm preparation and restoration and PILOTs. LIPA Operating and Deferred Expenses include PSEG Long Island's management fee, Authority staff and professional consultants. The management fee will follow a revised methodology in 2018 based on PSEG Long Island labor allocations.

Taxes, PILOTs and Assessments

PILOTs are budgeted at \$544.8 million in 2018 from \$538.5 million in 2017. PILOTs are both revenue-based and property-based. Property-based PILOTs are on Authority owned properties and the LIPA Reform Act establishes a 2% annual cap on increases. In addition, the Authority incurs real property taxes associated with generating assets under contract

through the National Grid Power Supply Agreement. The Authority continues to challenge these property taxes which are significantly over-assessed.

Staged Updates

On December 6, 2017, PSEG Long Island prepared a revised Third Staged Update superseding our November 1, 2017 submission to address input received from the Department of Public Service Staff regarding adjustments to property-based taxes, modifications to short-term interest rates, and removal of Utility 2.0 short-term capital costs from the Third Staged adjustments. With these revisions, the total Third Staged Update resulted in a reduction of \$6.22 million to 2018 rates as compared to the Three-Year Rate Plan. DPS has reviewed the Third Staged Update and their recommendation is attached as Exhibit D.

2018 Utility 2.0 Plan

The 2018 Proposed Budget includes \$15.5 million in Capital funding and \$4.3 million in Operating funding for Utility 2.0 initiatives. In accordance with a DPS recommendation (attached as Exhibit E), these amounts are lower than the amounts reflected in the preliminary 2018 Proposed Budget released in November 2017 and PSEG Long Island's Utility 2.0 proposal. DPS recommended that PSEG Long Island proceed with the first year of a five-year smart meter rollout. DPS also recommended that certain elements of the original Utility 2.0 proposal be adopted in limited part and that others be revised and re-submitted in future Utility 2.0 Long Range Plans. Specifically, DPS did not recommend any incremental spending on the Smart Grid Interconnection Portal until the proposal is updated to more closely align with the Public Service Commission's phased approach and refiled in July 2018 for the 2019 budget year. DPS also did not recommend funding of the Transportation Storage Demonstration Project, the On-bill Financing Project, and recommended lower than proposed spending on the Electric Vehicle Project.

Amendment of the 2017 Operating and Capital Budgets

PSEG Long Island's 2017 approved Budget is being increased by \$10.2 million to account for unplanned costs incurred that were beyond their control. These include costs incurred for unrealized storm preparation related to Hurricane Jose¹ and two approved new initiatives: Residential Credit Card Transaction Fee project and maintenance and security of the Shoreham facility.

¹ The 2015 DPS Rate Recommendation provided an allowance to PSEG Long Island for prudently incurred unrealized storm costs.

PSEG Long Island is reducing its approved 2017 Capital Budget by \$4.0 million to defer projects to 2018 related to the new Kings Highway substation and renovations at the Hicksville operation center.

Public Comment on the 2018 Operating and Capital Budgets

The Authority held two public comment sessions on the 2018 Budget, one each in Nassau and Suffolk Counties, on November 15, 2017. No spoken or written comments were received from the public at either session, and no written or e-mailed comments have been received subsequently.

The Department of Public Service reviewed the Authority’s Staged Update filing and Utility 2.0 filing as described above.

Recommendation

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

After questions and a discussion by the Trustees and the opportunity for the public to be heard, upon motion duly made and seconded, the following resolution was passed by the Trustees (all Trustees voted in favor of the budget, except for Trustee Cordaro).

1394. APPROVAL OF THE 2018 OPERATING AND CAPITAL BUDGETS AND AMENDMENT OF THE 2017 BUDGETS

WHEREAS, the Long Island Power Authority (“Authority”), through its wholly owned subsidiary, LIPA, owns the electric transmission and distribution system serving the counties of Nassau and Suffolk and a small portion of the County of Queens known as the Rockaways; and

WHEREAS, the Board of Trustees is required to approve annual budgets for the operations of the Authority and for capital improvements; and

WHEREAS, the Board of Trustees approved implementation of the Department of Public Service’s Rate Recommendation regarding the Three-Year Rate Proposal for the Long Island Power Authority and Service Provider, PSEG Long Island LLC (the “Rate Recommendation”) on December 16, 2015 and the level of revenues used to budget expenditures for the 2018 Budget presented to the Board is consistent with the Rate Recommendation; and

WHEREAS, the Authority released its proposed 2018 Operating and Capital Budgets on November 14, 2016 and held two public comment sessions on November 15, 2017; and

WHEREAS, the memorandum accompanying this resolution includes a schedule of deferrals and amortizations of certain generation capacity costs within the months of the year to affect the more accurate reflection of cost causation in electric rates within each month of the year; and

WHEREAS, the Board of Trustees approved certain changes to the Tariff for Electric Service regarding the Power Supply Charge that have been reflected in the Operating Budget presented to the public and the Trustees.

NOW, THEREFORE, BE IT RESOLVED, that consistent with the accompanying memorandum, the proposed 2018 Operating and Capital Budgets, which are attached hereto, are hereby approved; and

BE IT FURTHER RESOLVED, that the Authority amends its approved 2017 Capital Budget to reduce expenditures by \$4.0 million so as to defer these expenditures to 2018; and

BE IT FURTHER RESOLVED, that the Authority amends its approved 2017 Operating Budget to reflect an increase in expenditures by \$10.2 million for unplanned costs beyond the control of PSEG Long Island; and

BE IT FURTHER RESOLVED, that the Authority intends to finance the requirements of the 2018 and 2019 Capital Budgets, as adjusted from time to time, through a combination of internally generated funds and the issuance of tax-exempt or taxable debt of the Authority and authorizes the Officers of the Authority to evidence such intent by appropriate certifications.

The Chair stated that the last item on the agenda was the consideration of Approval of Plan of Finance and Bond Authorizations for 2018.

After requesting a motion on the matter, which was seconded, the Chair indicated that the matter would be presented by Joseph Branca.

Mr. Branca presented the following action item:

Requested Action

The Trustees are requested to authorize the issuance of up to \$880,000,000 aggregate principal amount of Electric System Revenue Bonds (the “Authorized Bonds”) for the purposes of (i) funding costs of system improvements and/or reimbursing such costs already incurred, including refinancing of notes or revolving credit agreement borrowings incurred

to finance such costs, up to a principal amount of \$430,000,000, (ii) refunding outstanding bonds of the Authority, (iii) financing capitalized interest on the bonds to be issued, (iv) funding amounts due for the termination of Financial Contracts entered into in connection with any Authorized Bonds or refunded bonds, and (v) paying fees and expenses in conjunction with each of the foregoing and the issuance of the bonds, including reimbursement of fees and expenses expended by the Authority in connection therewith, all as described herein. The Trustees are also being requested to authorize the execution and delivery of one or more interest rate or basis swaps relating to the Authorized Bonds and the termination, assignment or amendment of any swaps relating to any refunded bonds.

Plan of Finance

The Authority is considering issuing the Authorized Bonds for the purposes described above. The Authority has outstanding fixed rate bonds eligible for advanced refunding.

Should appropriate market conditions exist, the Authority is requesting authorization to refund such bonds. The Authority has also determined that it may be appropriate to enter into one or more interest rate or basis swaps (“Financial Contracts”) relating to the Authorized Bonds, should they provide debt service savings or mitigate interest rate risk for the Authorized Bonds as compared to merely issuing bonds. Authorization to enter into such agreements with an aggregate notional amount of up to \$430,000,000 is requested. The material terms of the agreements relating to any such Financial Contracts are expected to be substantially similar to agreements previously entered into by the Authority and may include interest rate risk, basis risk, settlement risk, termination risk, counterparty risk, and certain continuing covenants.

Authorized Actions

The Authorized Bonds will be issued as either fixed rate or variable rate bonds or a combination thereof and sold either on a negotiated basis (i) to one or more underwriters for resale to investors or (ii) directly to one or more investors or financial institutions at such price or prices and on such terms and conditions as they shall determine to be the most cost effective and advantageous for the Authority. The new Authorized Bonds could be issued in conjunction with such previously authorized, but not yet issued, bonds or be sold separately.

To the extent that any variable rate bonds are secured by letters of credit, the selection of bank letters of credit providers to credit enhance such Bonds will be made by a selection committee comprised of Authority staff pursuant to a new procurement process. The proposed terms and conditions of the bank letter of credit agreements are expected to be substantially similar to the agreements previously executed by the Authority with letter of credit banks.

Any underwriter, dealer, or swap counterparty will be one of the firms approved pursuant to the Authority’s most recent procurement for underwriting, investment banking and swap counterparty services, which firms include BofA Merrill Lynch, Barclays, Citigroup, Goldman, Sachs & Co., J.P. Morgan, Jefferies, Morgan Stanley, RBC Capital Markets,

Ramirez & Co. Inc., Siebert Cisneros Shank & Co. LLC, TD Securities and Wells Fargo Securities. The Trustees are requested to permit the Chief Executive Officer or Chief Financial Officer of the Authority to designate, as necessary, the underwriters, remarketing agents, or swap counterparties, as applicable, assigned to each bond series from the Board approved list of firms.

As and to the extent that Refunding Bonds are issued for the purpose of refunding bonds with respect to which there are existing interest rate swap agreements, the Chief Executive Officer, Chief Financial Officer or Controller of the Authority will be authorized to allocate such interest rate swap agreements to other Authority bonds or notes or to terminate or amend such agreements, all as such officer may determine appropriate so as to permit the Authority to obtain the benefit of such interest rate swap agreements or to minimize the cost associated with the refunding and to the extent that such agreements are terminated or amended, some or all of the costs of such termination or amendment may be funded with the proceeds of the Refunding Bonds.

Recommendation

Based upon the foregoing and the recommendation of the Finance and Audit Committee, I recommend that the Trustees adopt the resolutions attached hereto authorizing the issuance of up to \$880,000,000 aggregate principal of Electric System General Revenue Bonds, of which no more than \$430,000,000 in bonds may be issued to fund new money capital expenditures, the execution and delivery of one or more new interest rate swap agreements, and the termination or amendment of one or more interest rate swap agreements, all as described above.

After questions and a discussion by the Trustees and the opportunity for the public to be heard, upon motion duly made and seconded, the following resolution was passed by the Trustees.

1395. AUTHORIZATION RELATING TO THE ISSUANCE OF ELECTRIC SYSTEM GENERAL REVENUE BONDS FOR THE PURPOSES OF FUNDING COSTS OF SYSTEM IMPROVEMENTS AND CERTAIN OTHER COSTS AND REFUNDING CERTAIN OUTSTANDING BONDS

WHEREAS, on May 13, 1998, Long Island Power Authority (the "Authority") adopted its Electric System General Revenue Bond Resolution (the "General Resolution"), which authorizes bonds, notes or other evidences of indebtedness of the Authority, such bonds to be designated as "Electric System General Revenue Bonds" (the "Bonds"), for, among other purposes, funding Costs of System Improvements (as defined in the General Resolution) and other lawful purposes of the Authority and refunding other bonds of the Authority; and

WHEREAS, the Authority may sell Bonds on a negotiated basis to one or more underwriters for resale to the public or by private placement to one or more investors or institutions at such price or prices as the Authority shall determine; and

WHEREAS, Article II of the General Resolution requires that the issuance of each series of Bonds by the Authority shall be authorized by a supplemental resolution or resolutions of the Authority adopted at or prior to the time of issuance, subject to further delegation to certain officers to establish the details of the terms of such Bonds; and

WHEREAS, the Authority has various series of outstanding Bonds and Subordinated Indebtedness (as defined in the General Resolution) that may advantageously be refunded; and

WHEREAS, the Authority wishes to authorize the issuance of one or more series of Bonds (the “Authorized Bonds”) for the purpose of funding Costs of System Improvements (as defined in the General Resolution) and/or reimbursing such costs already incurred, including refinancing of notes or revolving credit agreement borrowings incurred to finance such costs and for the purpose of refunding all or a portion of outstanding fixed or variable rate Bonds and Subordinated Indebtedness (the “Specified Bonds”), which Authorized Bonds shall be in an aggregate principal amount not to exceed \$880,000,000, of which no more than \$430,000,000 in principal amount shall be issued for the purpose of funding Costs of System Improvements; and

WHEREAS, the Authority has entered into interest rate swap agreements relating to certain of the Specified Bonds and, to the extent that such Specified Bonds are refunded, it is anticipated that such interest rate swap agreements will either be reallocated to other bonds or notes of the Authority, assigned to or assumed by other counterparties, or terminated, as determined by the by the Chief Executive Officer or Chief Financial Officer; and

WHEREAS, the Authority wishes to issue the Authorized Bonds as either a fixed rate or variable rate or a combination thereof; and

WHEREAS, in order to achieve such purposes there has been prepared and submitted to the Trustees a form of Twenty-Seventh Supplemental Resolution (the “Twenty-Seventh Supplemental General Resolution”); and

WHEREAS, the General Resolution permits the Authority to enter into Financial Contracts (as defined therein), which include interest rate caps or collars and forward rate, future rate and certain swap agreements with Qualified Counterparties (as defined therein); and

WHEREAS, the Authority has determined that the use of such swap agreements is appropriate in certain circumstances but recognizes that certain risks can arise in connection with their use and the Authority has adopted guidelines (the “Guidelines”) for the use of such agreements in order to assure that such agreements are used for appropriate purposes and to assure that the risks potentially associated with such agreements are effectively managed and minimized; and

WHEREAS, under current market conditions the Authority has determined that it may achieve debt service savings by entering into one or more such interest rate swap agreements in an aggregate notional amount of up to \$450,000,000 relating to all or a portion of the Authorized Bonds pursuant to which the Authority and the counterparties thereto would agree to make payments to one another based principally upon certain indices, formulae or methods to be specified therein; and

WHEREAS, the decision as to which specific strategy or strategies to be employed in connection with such new or existing interest rate swap agreements and the indices, formulae or methods to be used in calculating payments to be made to the Authority or the counterparties will be made by the Chief Executive Officer or Chief Financial Officer, taking into account market conditions and the advice of the Authority's Financial Advisor, with the intention of lowering the effective rate of interest payable in connection with the Authority's indebtedness or mitigating risks associated with such indebtedness consistent with interest rate and other risk considerations;

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

1. The Twenty-Seventh Supplemental General Resolution, in the form presented to this meeting and made a part of this resolution as though set forth in full herein, is hereby approved and adopted. The Chief Executive Officer, Chief Financial Officer, Controller and General Counsel and Secretary (collectively, the "Authorized Officers") are each hereby authorized to deliver the Twenty-Seventh Supplemental General Resolution to The Bank of New York Mellon, as the Trustee for the Bonds, with such amendments, supplements, changes, insertions and omissions thereto as may be approved by such Authorized Officer, which amendments, supplements, insertions and omissions shall be deemed to be part of such resolution as approved and adopted hereby.

2. The Authorized Officers, are each authorized to sell all Bonds issued on a negotiated basis either (i) to one or more underwriters for resale to investors or (ii) by private placement to one or more investors or financial institutions at such price or prices as determined to be the most cost effective and advantageous for the Authority.

3. Each Authorized Officer is hereby authorized with respect to each series of the Authorized Bonds, to execute and deliver a Bond Purchase Agreement (a "Bond Purchase Agreement") in substantially the form of the bond purchase agreement executed by the Authority in connection with the issuance of the Authority's Electric System General Revenue Bonds, Series 2016B, with such modifications thereto as any Authorized Officer, upon the advice of counsel to the Authority, approves, or in in connection with any private placement of the Authorized Bonds, a placement continuing covenant or other financing, loan or credit agreement (each a "Placement Agreement") with the purchaser(s) thereof in such form, upon advice of counsel to the Authority, as may be approved by such Authorized Officer, which approval in each case shall be conclusively evidenced by the execution thereof by such Authorized Officer.

4. Each Authorized Representative is hereby authorized and directed to execute and deliver any and all documents, including but not limited to the execution and delivery of one or more official statements or other disclosure documents and instruments and to do and cause to be done any and all acts necessary or proper for carrying out each Bond Purchase Agreement or Placement Agreement, the issuance, sale and delivery of the Authorized Bonds and for implementing the terms of each Bond Purchase Agreement or Placement Agreement, and the transactions contemplated thereby, the Twenty-Seventh Supplemental General Resolution and this resolution.

5. As and to the extent that Refunding Bonds (as defined in the General Resolution) are issued for the purpose of refunding Specified Bonds with respect to which there are existing interest rate swap agreements, the Chief Executive Officer, the Chief Financial Officer and Controller are each authorized to allocate such interest rate swap agreements to such other outstanding Authority bonds or notes, or to terminate such agreements, as such officer may determine appropriate so as to permit the Authority to obtain the benefit of such interest rate swap agreements or to minimize the cost associated with the refunding and, to the extent that such agreements are terminated, some or all of the costs of such termination may be funded with the proceeds of the Refunding Bonds, as determined by such officer. Any such officer is also hereby authorized to arrange for the assignment and assumption of any existing interest rate agreement to another counterparty or the amendment of any such agreement, to the extent determined to be advisable.

6. Any Authorized Officer is hereby authorized to arrange for the execution and delivery of a new interest rate agreement on substantially the same terms as such agreements previously entered into by the Authority, including without limitation, the basis swap entered into in connection with the Authority's Series 2016A Bonds or the reallocation of any existing interest rate agreement to another counterparty or the amendment of any such agreement, to the extent determined to be advisable.

7. As and to the extent that the Chief Executive Officer or the Chief Financial Officer determines that it would be advantageous in current market conditions to issue bond anticipation notes, such officer is hereby authorized to determine whether such bond anticipation notes shall be issued as "Bonds" or "Subordinated Indebtedness" (as defined in the General Resolution). In the event that bond anticipation notes are issued as Subordinated Indebtedness, the details thereof shall be incorporated in a Note Certificate executed by such officer and delivered to the trustees under the General Resolution and the Authority's Electric System General Subordinated Revenue Bond Resolution, along with a copy of this resolution. Such Note Certificate may include such amendments and modifications to the provisions of this resolution as such officer shall determine necessary and appropriate to effectuate such determinations and details. A copy of such Note Certificate also shall be filed with this resolution into the records of the Authority and, upon such filing, shall be deemed to be a part of this resolution as if set forth in full herein.

8. The Authorized Officers of the Authority are, and each of them hereby is, authorized to enter into interest rate swap agreements in an aggregate notional amount of up to \$450,000,000 relating to the Authorized Bonds with such Qualified Counterparties (as

defined in the General Resolution) as such officers may select in accordance with the Guidelines, which agreements shall (i) commence on such date or dates as such Authorized Officer specifies, (ii) have a term ending on or prior to the anticipated final maturity of the bonds to which they relate, as the Authorized Officer specifies, (iii) provide for payments to the Authority determined based upon such index, formula or method as may be approved by the Authorized Officer, and (iv) otherwise be in accordance with the Guidelines and substantially in the form of interest rate swap agreements entered into by the Authority in relation to other interest rate swap transactions, with such changes and additions to and omissions from such form as such authorized executing officer deems in his discretion to be necessary or appropriate, such execution to be conclusive evidence of such approval. In connection with the authorizations herein set forth, the Authority has determined, after consideration of the risks inherent in the use of interest rate swap agreements, including those outlined in the memo submitted to the Trustees in connection with the financing authorized hereby and the advice of the Authority's financial advisor relating to the use of the proposed interest rate swap agreements, that (a) the use of such interest rate swap agreements will, in the judgment of the Authority, result in lowering the effective rate of interest payable in connection with the Authority's indebtedness, (b) the risks of the proposed interest rate swap agreements are both manageable and reasonable in relation to the potential benefits; and (c) the proposed interest rate swap agreements are necessary or convenient in the exercise of the power and functions of the Authority under the Act.

9. The Authorized Officers are, and each of them hereby is, authorized to enter into reimbursement or other agreements with banks or other financial institutions providing Credit Facilities (as defined in the General Resolution) in connection with the Authorized Bonds, which agreements shall be substantially similar to such agreements previously entered into by the Authority in relation to other Credit Facilities, with such changes and additions to and omissions from such prior agreements as such authorized executing officer deems in his discretion to be necessary or appropriate, such execution to be conclusive evidence of such approval. Such agreements may be entered into with Barclays Bank PLC, Bank of Montreal, Citibank NA, Royal Bank of Canada, State Street Bank and Trust Company, TD Bank NA, US Bank, and/or Wells Fargo Bank, NA.

10. Each Authorized Officer is hereby further authorized and directed to execute and deliver any and all documents and instruments and to do any and all acts necessary or proper for carrying out and implementing the terms of, and the transactions contemplated by this resolution and each of the documents authorized thereby and hereby.

11. This resolution shall take effect immediately.

The Chair then allowed public comment to be heard, after which he announced that the next Board Meeting would be scheduled for January 24, 2018.

The Chair then asked for a motion to adjourn to executive session to discuss pending litigation matters and announced that no votes would be taken in executive session, and that the

Trustees would not be returning to open session. The motion was duly made and seconded, and the following resolution was adopted:

1396. EXECUTIVE SESSION – PURSUANT TO SECTION 105 OF THE PUBLIC OFFICERS LAW

RESOLVED, that pursuant to Section 105 of the Public Officers Law, the Trustees of the Long Island Power Authority shall convene in Executive Session for the purpose of discussing litigation matters.

At approximately 1:56 pm the open session of the Board of Trustees was adjourned on a motion to enter into executive session which ended at approximately 2:26 pm.
