LONG ISLAND POWER AUTHORITY

MINUTES OF THE REV COMMITTEE MEETING

HELD ON SEPTEMBER 21, 2016

The REV Committee of the Long Island Power Authority (the “Authority") was convened at 9:38 a.m. at LIPA Headquarters, Uniondale, NY, pursuant to legal notice given on September 16, 2016; and electronic notice posted on the Authority’s website.

The following Trustees of the Authority were present:

Mark Fischl, Committee Chair
Sheldon Cohen
Matthew Cordaro
Suzette Smookler
Elkan Abramowitz
Peter Gollon

Representing the Authority were Thomas Falcone, Chief Executive Officer; Joseph Branca, Chief Financial Officer: Jon Mostel; General Counsel; Justin Bell, Director of Rates and Regulations; Rick Shansky, Managing Director of Operations Oversight; John Little, Managing Director of Strategy and Planning; Kenneth Kane, Managing Director of Financial Oversight; Marilyn Gilbert, Director of Operations Services Oversight; Michael Deering, Director of Customer Service and Program Oversight.

Representing PSEG were John O’Connell, Vice President of Transmission & Distribution; Daniel Eichhorn, Vice President of Customer Service; M. Courtney McCormick, Vice President of Renewables and Energy Solutions; James Parmelee, Senior Manager of Power Markets; Michael Voltz, Director of Energy Efficiency & Renewables; and Paul Napoli, Vice President of Power Markets.

Committee Chair Fischl welcomed everyone to the REV Committee meeting of the Long Island Power Authority Board of Trustees and stated that the first item on the agenda is the adoption of the minutes from the May 18, 2016 Committee meeting.

The Chair made a motion to accept the minutes of the May 18, 2016 meeting. Upon motion duly made and seconded, the minutes were approved unanimously.

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The Chair then stated that next on the agenda is a discussion of the South Fork RFP, which would be presented by Rick Shansky and James Parmelee.

Mr. Shansky and Mr. Parmelee discussed the South Fork RFP and then took questions from the Trustees.

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Chair Fischl stated that the next item on the agenda is a recommendation for Approval of Feed-in-Tariffs and Complaints Process, which would be presented by James Parmelee.

Mr. Parmelee presented the following item and took questions from the Trustees:

Requested Actions:

The REV Committee of the Board of Trustees is being asked to adopt resolutions recommending that the full Board approve the following changes to the Tariff for Electric Service:

(1) To authorize the purchase of up to an additional 60 MW of generation from solar and fuel cell resources under the feed-in tariff provisions of Service Classification No. 11 (Buy- Back Service). The proposed feed-in tariffs support the Authority's achievement of Reforming the Energy Vision (REV) goals for expansion of distributed and renewable energy resources on Long Island.

(2) To approve modifications to the complaint procedures within the Tariff directing customers to contact the Long Island Office of the Department of Public Service.

Additional Purchases under the Feed-in Tariff

As part of their overall sponsorship of renewable generation, the Authority's Board of Trustees in 2012 set forth their plan to add 400 MW of new renewable energy generation to LIPA's resource portfolio through an expanded Feed-in Tariff program (120 MW) and

a competitive procurement (280 MW). In 2013 and 2014, this plan was implemented through the issuance of the Clean Solar Initiative II (the Authority's second solar feed-in tariff), the Clean Renewable Energy Initiative (the Authority's first non-solar feed-in tariff) and the 280 MW RFP. Procurements under these three initiatives to date have achieved a portion of the 400 MW goal. It is now anticipated that more than 200 MW of additional renewable capacity will be required to meet the goal.

To fill this gap, PSEG Long Island issued another renewable RFP in 2015 and PSEG Long Island and Authority Staff now propose to modify LIPA's tariff to implement two additional Feed-In tariffs targeting up to an additional 60 MW:

1. **<u>Commercial (Roof-Top) Solar Feed-in Tariff</u> - This solicitation targets up to 20 MW of nonresidential rooftop-mounted and carport-mounted solar projects between 200 kW and 1,000 kW in size, for a term of 20 years. These projects are larger in size than those targeted by PSEG Long Island's existing net metering programs but are smaller than those of the 2015 Renewable RFP.**

2. **<u>Fuel Cell Feed-in Tariff</u> – This solicitation targets up to 40 MW of fuel cell generation, for individual projects sized between 1,000 kW and 20,000 kW, for a term of 20 years. Consistent with REV principles, fuel cell feed-in tariff participants must be located in those areas designated by PSEG Long Island that will benefit from the highly reliable injection of a constant power supply, which will avoid or defer the need for traditional transmission and distribution investments.**

Each initiative has been designed to target selected technologies that provide specific benefits to specific aspects of the LIPA system. They build on the experience gained from previous feed-in tariff offerings and related solar energy projects, and are consistent with and supportive of the principles of the State's *Reforming the Energy Vision*. Two key environmentally important and REV-like features embodied in this proposal are that:

- **Solar projects must be mounted on non-residential rooftops or carports, regardless of where they are located throughout the service territory, to minimize any loss of green space or other negative impact on the natural environment.**
- **Fuel cells, which consume natural gas or biofuels in a clean and efficient manner to produce electricity, will be permitted only in locations on the LIPA system where system upgrades are currently required or anticipated, thereby channeling distributed generation solutions to help defer capital spending requirements on utility infrastructure.**

The prices paid by LIPA for generation from these two feed-in tariffs will be established through competitive auctions held separately for each type of generation. Other than price, the contractual terms of LIPA's agreements with the project owners will be set forth in standard- offer, non-negotiable power purchase agreements (each, a "PPA"). The term of each PPA will be 20 years. The PPAs will entitle LIPA to the total output of these renewable generators, including all energy, capacity, ancillary services and beneficial environmental attributes produced by each facility for the full term of each agreement. Other than as set forth herein, LIPA's Chief Executive Officer has the authority to set the terms of the form

PPAs and may modify such form PPAs as needed. The form PPAs will become available on the website of PSEG Long Island on or before the tariff effective date.

Financial Impacts:

The proposed feed-in tariffs are intended to procure the specified resources at the lowest price achievable through a competitive auction process. The selected resource providers will be paid monthly based upon the output of their facility each month and the price established through the competitive auction. The payments made to the resource provider will be recovered from customers through the Power Supply Charge (FPPCA) on a monthly basis, as the payments are incurred. This practice is similar to the treatment of the existing feed-in tariffs and payments made to other generators under Service Classification No. 11 Buy-Back Service.

LIPA expects to purchase up to approximately 24.5 GWh per year from the up to 20 MW of solar generation that is being solicited, which displaces generation that would have been purchased from other sources. Because the auction has not yet occurred, the clearing price has not yet been ascertained. However, by way of example, if the auction produces a clearing price of 16.5¢ per kWh with an average Load Factor of 14%, the purchase would cost LIPA approximately $4 million per year. Using an average cost of power at 7.0¢ per kWh, based on the 2016 approved budget, this renewable power alternative will increase power supply costs by up to an estimated $2.3 million per year, which will be recovered in customer's FPPCA charges.

LIPA expects to purchase up to approximately 333 GWh per year from the 40 MW of Fuel Cell generation that is being solicited, which displaces generation that would have been purchased from other sources. Because the auction has not yet occurred, the clearing price has not yet been ascertained. However, if the auction produces an average price of 16.5¢ per kWh with an average load factor of 95%, the purchase would cost LIPA approximately $55 million per year. Using the average cost of power at 7.0¢ per kWh, based on the 2016 approved budget, this power alternative will increase power supply costs by up to an estimated $31.6 million per year, which will be recovered in customer's FPPCA charges.

Both of these estimated impacts are considered reasonably indicative of (and presumably higher than) the prices that might be realized in the competitive auctions because the last solar feed-in tariff solicitation offered by the Authority produced a clearing price of 16.88 ¢ and a recent LIPA procurement of fuel cell projects resulted in an average levelized cost of 16.47¢.

The combined effect of these two programs amounts to an estimated $34 million per year, which constitutes a customer bill impact of less than $1.40 per month for a typical residential customer using 775 kWh. It is also important to note that these programs will lessen the bill impact from other renewable purchases in the pending 2015 Renewable RFP. Moreover, this estimated impact does not reflect any of the savings in generation capacity or transmission and distribution investment deferral that these resources can be expected to provide. Those benefits cannot be quantified until the specific resources have been selected,

but the Fuel Cell Feed-in Tariff, in particular, will be administered to promote the siting of fuel cells in areas where they can defer investment in the T&D system.

Comments Received from the Public:

Public hearings were held on July 5th, 2016 in Nassau and Suffolk Counties, and written comments were accepted through July 11th, 2016. Several members of the public spoke at the public hearings and written comments were received from two parties. Representatives from the environmental community, including the Sierra club, were generally supportive of the Commercial Solar Feed-in Tariff but commented that the Authority should be accepting larger amounts of solar generation under the feed-in tariffs. One speaker suggested 1,000 MW instead of 20 MW. The other comment from the environmental community was that fuel cell technology typically consumes a non-renewable fuel (natural gas) and should not be included under the feed- in tariff for renewable resources.

Other speakers representing the solar and fuel cell industries were supportive of the proposal which promotes the further development of renewable resources on Long Island with substantially lower emissions than conventional generation, and raised several technical points:

1. **PSEG Long Island received comments from a developer regarding the proposed tariff's prohibition against projects already in the NYISO Interconnection Queue being accepted into the Feed-in Tariff bidding process. The developer expressed concern that this prohibition prevents developers from using the NYISO interconnection process to establish an accurate transmission interconnection cost estimate. The Developer proposed that PSEG Long Island modify the proposed tariff language so that PSEG Long Island would, at the request of a potential bidder and for an appropriate fee, perform the activities found in NYISO SGIP section 32.2.4 "Supplemental Review" and provide the Developer with a non-binding good faith estimate of the relevant interconnection costs.**
2. **A developer expressed confusion regarding the Tariff's definition of Fuel Cell Generating Equipment for net metering and whether this definition applied to the proposed Fuel Cell Feed-in Tariff.**
3. **A developer questioned whether multiple fuel cell units at a particular site could be combined as a single project for purposes of meeting the Fuel Cell Feed-in Tariff's minimum project size requirement.**
4. **A developer asked whether fuel cell projects are required to have access to firm (uninterruptible) supplies of fuel.**

One commenter suggested that PSEG Long Island should favor local Long Island bidders over bidders whose headquarters are located off-island in the evaluation process.

An Energy Specialist for the Suffolk County Legislature submitted comments requesting that the Feed-in Tariff be delayed in order to allow Suffolk County sufficient time to issue an RFP soliciting proposals for FIT projects to be developed on Suffolk County land. The

commenter also requested that a standardized carport design be developed by PSEG Long Island and offered to FIT bidders.

Staff has considered these public comments and responds as follows. Staff concludes that the sizes and sources of the renewable generation should be maintained at up to 20 MW for solar and up to 40 MW for fuel cells in order to fulfill the original commitment of the Board (rather than some higher level). The 20 MW cap for solar was selected in light of the anticipated size of the market for commercial solar projects, while continuing to allow for larger projects to be selected in the 2015 Renewable RFP, if appropriate, and smaller projects to be eligible for net metering. Fuel cells are eligible, as they had been in the 280 MW Renewable RFP that was issued in 2013, because fuel cell technology is an eligible technology under the State's Renewable Portfolio Standard ("RPS") adopted by the New York Public Service Commission.

Regarding the comment received on the NYISO interconnection review process, Staff responds that the current NYISO tariff allows PSEG Long Island to conduct analysis for a developer in a manner similar to that proposed in the developer's comment. PSEG Long Island will conduct these reviews for potential Fuel Cell Feed-In Tariff developers without requiring them to formally enter the NYISO Interconnection Queue and without requiring modifications to the proposed Fuel Cell Feed-in Tariff.

In response to the comment expressing confusion over the definition of Fuel Cell Generating Equipment, Staff has proposed minor modifications to clarify that that definition applies only to net metering.

With respect to the question as to whether multiple fuel cell units could be combined at one site into a single project for purposes of meeting the minimum project size requirement, Staff responded in writing and on record at the public hearings that multiple fuel cell units may be combined at a single site in order to meet the minimum project size requirement. No modifications to the proposed tariff were necessary to make this clarification.

In response to the question of whether fuel cell projects are required to have access to firm (uninterruptible) supplies of fuel, there is no such requirement in the PPAs or the tariff.

Regarding the comment suggesting that local Long Island bidders be favored, Staff has determined that applicable law prevents the Authority from discriminating against out-of-state bidders. No tariff changes are warranted with respect to this comment.

In response to the Suffolk County Legislature comments requesting that the Feed-in Tariff be delayed in order to allow Suffolk County sufficient time to issue an RFP soliciting proposals for FIT projects to be developed on Suffolk County land, we have extended the end date of the FIT enrollment period by an additional month. This is in addition to the two-month delay resulting from postponement of the Authority's July board meeting. We believe the cumulative three- month delay provides Suffolk County with sufficient time to issue its RFP and is appropriate when balanced against LIPA's need to proceed in a timely manner in this and other procurements. While staff supports efforts to reduce developer

soft costs, we do not believe that carport design is a material driver of those costs nor does it warrant further delaying the FITs.
We will have the opportunity to consider this suggestion in future solicitations.

Staff determined that minor modifications are in order to further clarify (1) what is meant by the requirement that fuel cells be located in beneficial locations, (2) that application fees will be refunded to bidders who are not accepted into the feed-in tariffs, and (3) that the 20-year levelized gas price forecast used in the fuel cell price formulas is measured from 2018 to 2037. The tariff appended to this memorandum reflects these modifications. The Long Island Office of the Department of Public Service also reviewed the proposed tariff and provided a letter informing the Trustees that the proposed feed-in tariffs are consistent with the State's efforts under the Reforming the Energy Vision to move to a more distributed electric grid and recommending that the Trustees adopt these feed-in tariffs as proposed, including a minor modification. (*See* Exhibit E.) The Department of Public Service recommends that the evaluation of bids for fuel cell projects include a qualitative assessment that addresses "projects which may have attributes such as greater transmission and distribution deferral and reliability benefits." Staff accepts the Department's proposal and recommends that the estimated transmission and distribution avoided cost benefits of bids be considered in the evaluation of responsive bids as further set forth in the attached proposed tariff leaves.

<u>Modification to the Customer Complaint Process</u>

The Department of Public Service has requested some minor modifications to the tariff to clarify their role in addressing responsibility for addressing shared meter situations and rehearing of appeals lodged by customers. Consistent with the LIPA Reform Act, but not already addressed in the Tariff, the Department of Public Service has the responsibility for addressing complaints and any rehearing of decisions that were appealed to the Authority. The proposed modification directs customers to contact the Long Island Office of the Department to request such rehearings. The proposed modification also clarifies that the Manager (PSEG Long Island) will investigate and determine whether a shared meter condition exists, and inform building owners of their responsibilities for the charges. Tenants or landlords may contact the Long Island Office of the Department of Public Service for a review of the Manager's determination, which the Department will perform and provide to the Manager for implementation. If the shared meter complaint is still not resolved, the Department will forward its recommendation to the Authority's Chief Executive Officer for final decision.

<u>Recommendation:</u>

For the foregoing reasons, I recommend that the Committee adopt the attached resolutions recommending that the full Board approve the modifications to the Tariff for Electric Service ("Tariff"), effective October 1, 2016, to authorize up to 20 MW of purchases of renewable resources under a new Commercial Solar Feed-In Tariff and up to 40 MW of resources under a new Fuel Cell Feed-In Tariff, approve changes to the Complaint Procedures, and authorize the Chief Executive Officer to take all actions to implement these tariffs.

A motion was made and seconded, and the Trustees unanimously adopted the following resolutions:

RECOMMENDATION OF APPROVAL OF MODIFICATIONS TO LIPA'S TARIFF FOR ELECTRIC SERVICE IMPLEMENTING A FEED-IN TARIFF FOR COMMERCIAL ROOFTOP SOLAR PHOTOVOLTAIC (PV) GENERATION

WHEREAS, on October 25, 2012, the Trustees, in their resolution regarding the Generation and Transmission Request for Proposals, also directed staff to purchase up to an additional 400 MW of renewable generation through a combination of feed-in tariffs and competitive procurements; and

WHEREAS, to implement that plan in accordance with the Plan, Staff continues to develop and implement plans for the achievement of 400 MW of renewable resources through competitive procurement and competitively priced feed-in tariffs; and

WHEREAS, Staff is proposing to offer to purchase an additional 20 MW of renewable solar photovoltaic capacity to be located exclusively on commercial rooftops or on carports over paved areas to assist in achieving that 400 MW goal; and

WHEREAS, the proposed feed-in tariff will acquire these additional resources in a competitive manner from willing suppliers at a price to be determined by auction among the bidders, with all accepted solar PV bidders receiving the same fixed price per kWh for the fixed 20-year term; and

WHEREAS, the pricing structure gives greater certainty to the renewable resource owners who require a steady stream of revenue to support their fixed investment, and provides advantages to LIPA in that the cost of the program would be spread over a 20- year term and LIPA would only pay for renewable generation that is actually delivered by the participant as that generation is produced; and

WHEREAS, enrolling up to 20 MW of generation under the feed-in tariff for 20 years at a price that reflects the market conditions for such generation on Long Island would offset the purchase of other sources of energy, and the cost of the power purchased under the feed-in tariffs would be recorded as purchases of electricity under SC-11 and recovered from customers through the Power Supply Charge; and

WHEREAS, following the issuance of public notice in the State Register on May 18, 2016, two public hearings were held in Nassau and Suffolk counties on July 5, 2016, comments were received at the hearing from the public and written comments were received during the comment period, and the public comment period has since expired, and Staff has recommended that the feed-in tariff proposal be modified as set forth in the accompanying Memorandum;

NOW, THEREFORE, BE IT RESOLVED, that for the reasons set forth herein and in the accompanying Memorandum, the REV Committee of the Board of Trustees recommends that the full Board adopt and approve the Feed-in Tariff as modified; and be it further

RESOLVED, that the REV Committee of the Board of Trustees recommends that the full Board authorize the Chief Executive Officer and his designees to carry out all actions deemed necessary or convenient to implement this tariff, and be it further

RESOLVED, that the REV Committee of the Board of Trustees recommends that the full Board approve the attached tariff leaves reflecting its action as described herein.

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A motion was made and seconded, and the Trustees unanimously adopted the following resolutions:

RECOMMENDATION OF APPROVAL OF MODIFICATIONS TO LIPA'S TARIFF FOR ELECTRIC SERVICE IMPLEMENTING A FEED-IN TARIFF FOR FUEL CELL GENERATION

WHEREAS, on October 25, 2012, the Trustees, in their resolution regarding the Generation and Transmission Request for Proposals, also directed staff to purchase up to an additional 400 MW of renewable generation through a combination of feed-in tariffs and competitive procurements; and

WHEREAS, to implement that plan in accordance with the Plan, Staff continues to develop and implement plans for the achievement of 400 MW of renewable resources through competitive procurement and competitively priced feed-in tariffs; and

WHEREAS, Staff is proposing to offer to purchase 40 MW of fuel cell generating capacity to assist in achieving that 400 MW goal; and

WHEREAS, the proposed feed-in tariff will acquire these additional resources in a competitive manner from willing suppliers at a price to be determined by auction among the bidders, with all accepted fuel cell bidders receiving the price per kWh that conforms to their bid based on established formulas; and

WHEREAS, the pricing structure gives greater certainty to the renewable resource owners who require a steady stream of revenue to support their fixed investment, and provides advantages to LIPA in that the cost of the program would be spread over a 20- year term and LIPA would only pay for renewable generation that is actually delivered by the participant as that generation is produced; and

WHEREAS, enrolling up to 40 MW of generation under the feed-in tariff for 20 years at a price that reflects the market conditions for such generation on Long Island would offset the purchase of other sources of energy, and the cost of the power purchased under the

feed-in tariffs would be recorded as purchases of electricity under SC-11 and recovered from customers through the Power Supply Charge; and

WHEREAS, following the issuance of public notice in the State Register on May 18, 2016, two public hearings were held in Nassau and Suffolk counties on July 5, 2016, comments were received at the hearing from the public and written comments were received during the comment period, and the public comment period has since expired, and Staff has recommended that the feed-in tariff proposal be modified as set forth in the accompanying Memorandum;

NOW, THEREFORE, BE IT RESOLVED, that for the reasons set forth herein and in the accompanying Memorandum, the REV Committee of the Board of Trustees recommends that the full Board adopt and approve the Feed-in Tariff as modified; and be it further

RESOLVED, that the REV Committee of the Board of Trustees recommends that the full Board authorize the Chief Executive Officer and his designees to carry out all actions deemed necessary or convenient to implement these tariffs, and be it further

RESOLVED, that the REV Committee of the Board of Trustees recommends that the full Board approve the attached tariff leaves reflecting its action as described herein.

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A motion was made and seconded, and the Trustees unanimously adopted the following

resolutions:

RECOMMENDATION OF APPROVAL OF MODIFICATIONS TO LIPA'S TARIFF FOR ELECTRIC SERVICE IMPLEMENTING CERTAIN CHANGES TO THE CUSTOMER COMPLAINT PROCEDURES RELATED TO THE DEPARTMENT OF PUBLIC SERVICE

WHEREAS, the Department of Public Service has requested some modifications to the Tariff for Electric Service that direct customers to contact the Long Island Office of the Department in the first instance for rehearings of appeals and complaints regarding shared meters, which is consistent with the LIPA Reform Act; and

WHEREAS, following the issuance of public notice in the State Register on May 11, 2016, two public hearings were held in Nassau and Suffolk counties on July 5, 2016, the public was invited to submit comments at the hearing and in writing, and the public comment period has since expired;

NOW, THEREFORE, BE IT RESOLVED, the REV Committee of the Board of Trustees recommends that the full Board adopt and approve the proposed customer complaints tariff proposal; and be it further

RESOLVED, that the REV Committee of the Board of Trustees recommends that the full Board authorize the Chief Executive Officer and his designees to carry out all actions deemed necessary or convenient to implement these tariffs, and be it further

RESOLVED, that the REV Committee of the Board of Trustees recommends that the full Board approve the attached tariff leaves reflecting its action as described herein.

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Chair Fischl stated that the next item on the agenda is a recommendation for Approval of Zero Emission Credits Agreements with Exelon and NYSERDA, which would be presented by Rick Shansky.

Mr. Shansky presented the following item and then took questions from the Trustees:

<u>Requested Action</u>

The REV Committee is being requested to recommend to the Board that it authorize the Chief Executive Officer or his designee(s) to negotiate and execute agreements with (1) Nine Mile Point Nuclear Station LLC ("NMP") for the sale of ZECs associated with the Authority's 18% share of Nine Mile Point Unit 2 ("NMP2"); and (2) New York State Energy Research and Development Authority ("NYSERDA") for the purchase of ZECs associated with the Authority's share of statewide retail energy sales.

<u>Background</u>

On August 1, 2016 the New York State Public Service Commission ("PSC") issued an order establishing a Clean Energy Standard ("CES") and a Zero Emission Credit ("ZEC") requirement ("CES Order") that, among other things, established a 12-year program of payments to eligible nuclear power plants to support their continued production of zero emission electricity[1]. The CES Order directed the purchase of the plants' zero emission attributes or ZECs by NYSERDA under certain specified terms and conditions[2]; and imposed an obligation on load-serving entities under the PSC's jurisdiction to purchase ZECs from NYSERDA in proportion to their retail energy sales at the price paid by NYSERDA plus an administrative charge.

<u>Discussion</u>

As explained in the CES Order, the purpose of the ZEC program is to avoid the loss of carbon- free generation while the State is working towards compliance with the CES goal

[1] Cases 15-E-0302 and 16-E-0270, Order Adopting a Clean Energy Standard, issued and effective August 1, 2016.

[2] One ZEC would be purchased for each megawatt-hour (MWh) of eligible production.

of 50% renewable energy by 2030. The CES Order determined that the three upstate nuclear plants (Ginna, Fitzpatrick and Nine Mile Point) are currently eligible for ZEC payments because they are at-risk of being shut down before their operating licenses expire. The price to be paid by NYSERDA for ZECs is set at $17.48 per MWh for the period April 2017 through March 2019. Thereafter, the price will be increased to reflect the growing social cost of carbon (as determined by the federal government) and may be decreased to the extent that wholesale power prices are forecasted to increase. The need for these attribute payments was driven by wholesale power prices that have been depressed to levels below the forward costs of the nuclear plants, as well as the recognition that the wholesale market does not fully value the societal costs of carbon dioxide emissions. In that regard, the CES Order established a cap of 27.6 million MWh for the annual ZEC quantity to assure that payments would support no more than historic levels of generation.

While neither the Authority nor the New York Power Authority ("NYPA") is subject to the PSC's jurisdiction, the CES Order anticipated that both LIPA and NYPA would participate in this statewide initiative to the extent of their proportionate share of the State's clean energy objectives. To do so, the Authority would need to execute a contract with NYSERDA for the purchase of ZECs in proportion to the ratio of the energy distributed to its retail customers as compared to total statewide energy consumption. Pursuant to the CES Order, NYSERDA will offer a standard contract for its sales of ZECs to utilities and energy service companies. Based on the maximum allowed ZEC quantity and the Authority's share of statewide load (about 13%), Staff expects that the cost to the Authority for its purchase of ZECs will be approximately $49 million in 2017 (nine months) and $65 million for the full calendar year 2018. Thereafter, costs could increase with the projected social cost of carbon as determined by the federal government or decrease with forecasted wholesale market prices, as outlined in the CES Order.

In addition, as the Authority owns an 18% share of NMP2, NMP requires the Authority's consent in order to sell ZECs from the NMP facility to NYSERDA and the Authority would be entitled to receive its pro rata share of ZEC revenues derived from operation of the NMP facility. The CES Order effectively capped the sale of ZECs by NMP at 9.2 million MWh annually. The Authority would receive its proportionate share (i.e., 18% of NMP Unit 2 output divided by NMP total output) of a fixed quantity of 9.2 million ZECs per year at the price paid to NMP by NYSERDA. Any shortfalls in ZEC revenue caused by reduced output of NMP Unit 1 would be borne by NMP. Staff expects that the Authority would receive annual revenue of approximately $15 million (nine months) in 2017 and $20 million for the full calendar year 2018 and each year thereafter until 2029.

The cost to the Authority for participation in the ZEC program, net of ZEC revenues for which it is entitled as a co-owner of NMP2, is expected to be approximately $34 million in 2017 (nine months) and $45 million (full calendar year) in 2018. These net costs are estimated to equate to an average residential customer bill impact of $1.95 per month.

Avoiding the loss of carbon-free generation through ZEC purchases costs less than replacing such carbon-free generation with new renewable generation. The CES Order noted that ZEC prices should always be less than the cost of procuring additional

renewable energy credits from new resources. Staff estimates that the cost of acquiring other renewable attributes would be between two and ten times the cost of ZECs.

<u>Recommendation</u>

Based upon the foregoing, I recommend that the Committee adopt the attached resolution.

A motion was made and seconded, and the Trustees adopted the following resolution, Trustee Smookler opposed the resolution:

AUTHORIZATION FOR NEGOTIATION AND EXECUTION OF AGREEMENTS FOR THE SALE AND PURCHASE OF ZERO EMISSION CREDITS

WHEREAS, On August 1, 2016 the New York State Public Service Commission ("PSC") issued an order establishing a Clean Energy Standard ("CES") and a Zero Emission Credit ("ZEC") requirement ("CES Order") that authorized the sale of ZECs by eligible nuclear power plants to the New York State Energy Research and Development Authority ("NYSERDA") and imposed an obligation on load-serving entities ("LSEs") under the PSC's jurisdiction to purchase ZECs from NYSERDA; and

WHEREAS, the Authority owns an 18% interest in Nine Mile Point Unit 2 ("NMP2") and is entitled to receive its pro rata share of revenues received from the sale of ZECs by NMP2; and the majority owner, Nine Mile Point Nuclear Station LLC, requires the Authority's consent to sell ZECs produced by NMP2; and

WHEREAS, NYSERDA will be offering a standard contract to LSEs for the purchase of ZECs in accordance with the terms in the CES Order; and

NOW, THEREFORE, BE IT RESOLVED, that the REV Committee recommends that the Trustees authorize the Chief Executive Officer or his designee(s) to negotiate and execute agreements with (1) Nine Mile Point Nuclear Station LLC ("NMP") for the sale of ZECs associated with the Authority's 18% share of Nine Mile Point Unit 2 ("NMP2"); and (2) New York State Energy Research and Development Authority ("NYSERDA") for the purchase of ZECs associated with the Authority's share of statewide retail energy sales, consistent with the attached memorandum and the terms set forth in the CES Order.

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Chair Fischl stated that the next item on the agenda is an update on PSC Activity related to REV Initiative, which would be presented by Rick Shansky.

Mr. Shansky discussed the PSC Activity related to REV Initiative and then took questions from the Trustees.

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Chair Fischl then entertained a motion to adjourn, which was duly made and seconded, after which the meeting concluded at approximately 10:44 a.m.