

**LONG ISLAND POWER AUTHORITY  
MINUTES OF THE 178th MEETING  
HELD ON OCTOBER 18, 2006**

**Pursuant to notice dated October 11, 2006, the Long Island Power Authority (the "Authority") was convened for the one hundred and seventy- seventh time at 11:14 AM at the Omni Teleconference Center, in Uniondale, NY.**

**The following Trustees of the Authority were present:**

**Richard M. Kessel, Chairman  
Patrick Foye, Deputy Chairman  
Howard Steinberg, Deputy Chairman  
Michael Affrunti  
Nancy A. Akeson  
Harvey Auerbach  
Lawrence Elovich  
John Fabio  
Jonathan Sinnreich**

**Also representing the Authority were Stanley Klimberg, General Counsel, Edward Grilli, Chief of Staff, Seth Hulkower, Chief Operating Officer, Elizabeth McCarthy, Chief Financial Officer, Richard Bolbrock, Vice President – Power Markets, Bert Cunningham, Vice President – Communications, Kenneth Kane, Controller, and Kathleen Stella, Secretary to the Board of Trustees.**

Upon determining that a quorum was present, Chairman Kessel called the meeting to order.

Chairman Kessel stated that two very unfortunate incidents have happened since the last meeting of the Board of Trustees. The Chairman continued that this past summer Campbell Ayling, a great person and terrific lawyer, passed away. He added that Campbell Ayling contributed a great deal to the Long Island Power Authority, and he was a friend to all.

Chairman Kessel stated that Campbell did a terrific job working with Mr. Klimberg and the other member of the legal team, and he was an extraordinary individual. The Chairman continued that Campbell had a great sense of humor. He added that Campbell worked on many items for the Board.

Chairman Kessel stated that LIPA is very sorry for Campbell's passing, and this has been very difficult. The Chairman continued that Campbell was very young, and he left a family behind. He indicated that this is a terrible tragedy for the Authority.

Chairman Kessel stated that the second unfortunate incident was that one of LIPA's employees, Elizabeth McCain, lost her husband in a tragic accident. The Chairman continued that he has known Ms. McCain and her family for many years. He indicated that this is another terrible loss at LIPA.

Chairman Kessel asked that a moment of silence be held for both. (A moment of silence was held.)

Chairman Kessel stated that he would like to welcome Mr. Lawrence Elovich to the LIPA Board. The Chairman continued that Mr. Elovich was recently appointed by Governor Pataki, and he is a prominent lawyer from Long Beach. He added that Mr. Elovich brings a lot of expertise and talent, and on behalf of the Board of Trustees and all of LIPA's employees, he welcomes Mr. Elovich.

The Chairman stated that the first item on the agenda is approval of the minutes of the June 22, 2006 meeting of the Board of Trustees.

Upon a motion duly made and seconded, the following motion was approved, with Deputy Chairman Steinberg and Trustee Maimoni abstaining:

**785. APPROVAL OF MINUTES AND RATIFICATION OF ACTIONS TAKEN AT THE JUNE 22, 2006 MEETING OF THE BOARD OF TRUSTEES OF THE LONG ISLAND POWER AUTHORITY**

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**RESOLVED**, that the Minutes of the meeting of the Authority held on June 22, 2006 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.

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Chairman Kessel stated that Suffolk Legislator John Kennedy wishes to address the LIPA Board.

Legislator Kennedy stated that he is a Legislator from the Twelfth Legislative District in Suffolk County, and he thanks the Chairman and the Board for the opportunity to address them. He continued that he wishes to speak about the Iroquois Gas Pipeline lateral that is presently under consideration for construction for fueling the proposed Caithness facility. He indicated that he agrees that there is a desperate need for additional baseload generation capacity on Long Island, but the fueling requirements are a concern.

Legislator Kennedy stated that the pipeline routes that have been proposed by Iroquois run through the LIPA right-of-ways. He continued that those LIPA right-of-ways go through residential areas and are proximate to schools. He added that the preferred pipeline route comes within 500 feet of an elementary school that houses several hundred children, and the sense of fear amongst the resident is paramount.

Legislator Kennedy stated that he hopes that the Board does not consider or execute a power purchase agreement with Iroquois yet, because he believes that there is still a very fluid environment that exists as far as the ultimate decision-making that should occur. He continued that there is a KeySpan 20-inch gas main that terminates within 5,000 feet of the proposed footprint for Caithness, and the requirements for the plant can be met by accessing the KeySpan pipeline.

Legislator Kennedy stated that he knows that there was an internal process that occurred which looked at the wisdom and fiscal prudence of going forward

with the Iroquois lateral. He continued that he asks that some of the analysis that occurred 18 months ago be revisited. He added that LIPA's internal decision making may have brought LIPA to the conclusion that it is fiscally prudent to pursue a process that would look at an approximate \$65 million expenditure, but he does not know whether this is evident to the LIPA ratepayer.

Legislator Kennedy stated that it appears that there was a business decision associated with abandoning the Long Island Expressway route. He continued that if it is still fiscally prudent to go forward with the Iroquois pipeline project, then Iroquois needs to be encouraged to re-embrace the Long Island Expressway route, which will have the least impact to residents, to schools, to nursing homes, to environmentally sensitive areas and in many respects to the heart of the Twelfth Legislative District. He added that this is a concern to hundreds of residents there.

Chairman Kessel stated that he appreciates Legislator Kennedy's concerns, and LIPA is looking at alternatives. The Chairman continued that he has spoken to members of the community and to other legislators about this. He added that he has asked LIPA's staff to work with Iroquois to find alternative routes that avoid a lot of these concerns.

Chairman Kessel stated that the route that Legislator Kennedy talked about will not happen. The Chairman continued that there are obviously business issues regarding the pipelines, and much of the reason that LIPA chose one entity over another was the significant financial difference. He indicated that the

community and the concerns that Legislator Kennedy has expressed are very important to LIPA.

Chairman Kessel stated that both he and Mr. Grilli, LIPA's Chief of Staff, are actively looking at alternatives. The Chairman continued that he would like to set up a meeting between Mr. Grilli, Legislator Kennedy and some of the community representatives. He added that LIPA wants to make sure that the community is comfortable with what LIPA does, and obviously putting a gas pipeline directly through a community raises concerns.

Chairman Kessel stated once LIPA receives the input of Legislator Kennedy and the community members, LIPA can develop a route that works for everyone. The Chairman continued that LIPA can also work to involve other public officials. He thanked Legislator Kennedy for his support of the Caithness project, where LIPA also made a lot of changes in order to be very sensitive to the community.

Chairman Kessel stated that it is the great advantage of public power that LIPA, as a public entity, can make such decisions in public. The Chairman continued that private investor owned utilities make all their decision behind closed doors.

Chairman Kessel stated that Legislator Kennedy has made valuable contributions to some of the energy issues before the Suffolk Legislature, and he appreciates the courtesy that Legislator Kennedy has extended to him. The

Chairman continued that it is another great advantage of public power that LIPA can work with the community and not make something a fait accompli. He added that the issues that Legislator Kennedy raises are legitimate and are properly raised, and LIPA will respond by coming up with an alternative that will work well.

Chairman Kessel stated that the next item on the agenda is Board consideration of a resolution to authorize the Chairman and Chief Financial Officer to proceed with the issuance of Electric System General Revenue Bonds for the purpose of refunding certain outstanding bonds, and thus lowering the effective debt service obligations of the Authority. The Chairman continued that the Trustees will be asked to adopt resolutions providing for (i) issuance of up to \$650,000,000 aggregate principal amount of Electric System General Revenue Bonds and/or (ii) the execution and delivery of one or more interest rate swap agreements as described in the resolution. He added that the Authority proposes to issue the Authorized Bonds to refund a portion of the Authority's outstanding bonds, including Electric System General Revenue bond Series 1998B, 2201A, 2001, 2003C and Series 2004A and the Electric System Subordinated Revenue Bonds, Series 8.

Chairman Kessel stated that the Authority may seek to lower the effective debt service cost of the Specific Bonds, by (i) issuing fixed rate Refunding Bonds, (ii) by issuing variable rate Refunding Bonds and entering into interest rate swap agreements (iii) by entering interest rate swap agreements related to the Specified Bonds, or (iv) any combination of the above. The Chairman continued that the decision as to the specific interest rate strategy or strategies

to be employed, and whether or not interest rate swap agreements are utilized, will be made by the Chairman and/or Chief Financial Officer, taking into account things like market conditions and the advice of the Authority's Financial Advisor as to which approach makes the best sense. He added that this bond issuance has been discussed with the Finance and Audit Committee.

Chairman Kessel asked Ms. McCarthy to discuss the resolution and take questions from the Board.

Ms. McCarthy stated that the purpose of this resolution is to continue LIPA's program of capturing refunding savings, to the extent that LIPA can. She continued that the interest rate market has moved in LIPA's favor this year, and the Board has previously given LIPA authorization to transact up to \$1,350,000,000 of new money and refundings, which was restricted by the Public Authorities Control Board (PACB) to \$1,050,000,000. She added that LIPA completed that authorization from the PACB, and in total this year, LIPA has done refinancings that have produced approximately \$87 million in present value savings for its customers.

Ms. McCarthy stated that if market conditions warrant, this authorization would allow LIPA to go back and achieve up to another \$650 million of refundings, which LIPA would target, in order to have a minimum savings of approximately three percent on a net present value basis.

Deputy Chairman Steinberg stated that he wishes to stress that the debt retirement needs to be a continuing focus for the Board, for LIPA and for Ms. McCarthy, and that it ought to be a priority for which LIPA makes sure that it does as much as it can in a fiscally prudent way to keep its eye on the debt reduction pool. He continued that he would like to see the pace accelerated, if possible.

Deputy Chairman Foye agreed. He asked that Ms. McCarthy provide a range of the estimated present value of the interest rate savings. Ms. McCarthy answered that with the market conditions at the end of September, LIPA would have approximately \$25 million of present value savings by doing a transaction of this size. She indicated that this will depend upon where the market is at, as of the date of the transaction.

Deputy Chairman Foye asked how much of this is new money. Ms. McCarthy answered that this would not be new money, rather this would all be refunding.

Deputy Chairman Foye asked whether the estimated savings are net of the assumed expenses. Ms. McCarthy responded, "That's correct".

Trustee Akeson stated that the Finance and Audit committee meets every month, and Ms. McCarthy keeps the Committee abreast of all refinancings. She indicated that she believes that LIPA is on top of this, and it will be addressed.

Chairman Kessel stated that the Finance and Audit Committee does great work. The Chairman continued that it is an independent Committee that meets every month, and it involves a lot of detail and work. He thanked Trustee Akeson, Deputy Chairman Foye, Trustee Affrunti and all the members of the Committee for their hard work.

Upon a motion duly made and seconded, the following resolution was approved unanimously:

**786. RESOLUTION ADOPTING RESOLUTIONS RELATING TO THE ISSUANCE OF ELECTRIC SYSTEM GENERAL REVENUE BONDS FOR THE PURPOSES OF REFUNDING ALL OR A PORTION OF CERTAIN OUTSTANDING AUTHORITY BONDS AND THE EXECUTION OF ONE OR MORE INTEREST RATE SWAP AGREEMENTS**

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**WHEREAS, Long Island Power Authority (the "Authority") is authorized by the Long Island Power Authority Act (the "Act") to issue its bonds for any purposes authorized thereby and to adopt bond resolutions establishing the contract with its bond and note holders; and**

**WHEREAS, on May 13, 1998 the Authority adopted its Electric System General Revenue Bond Resolution (the "General Resolution"), which, consistent with the Act, authorizes bonds of the Authority, designated as "Electric System General Revenue Bonds" (the "Bonds"), as special obligations of the Authority in accordance with the terms thereof for, among other purposes, refunding other Bonds and other obligations 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 at such price or prices as the Authority shall determine; and**

**WHEREAS, Section 205 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's outstanding obligations include, among others, the Electric System General Revenue Bonds, Series 1998B, 2001A, 2001L, 2003C and 2004A and the Electric System Subordinated Revenue Bonds, Series 8 (together these six series are referred to herein as the "Specified Bonds"); and**

**WHEREAS, the Authority wishes to authorize the issuance of Bonds (the "Refunding Bonds") for the purpose of refunding all or a portion of the Specified Bonds and for various related purposes, which Refunding Bonds shall be in an aggregate principal amount not to exceed \$650,000,000; and**

**WHEREAS, in order to achieve such purposes there has been prepared and submitted to the Trustees a form of Eleventh Supplemental Electric System General Revenue Bond Resolution (the "Eleventh 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 its Guidelines for the Use of Interest Rate Exchange Agreements (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 certain market conditions the Authority may achieve debt service savings by entering into one or more such interest rate swap agreements relating to all or a portion of the Refunding Bonds and/or the Specified 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 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 of the Authority or terminated, as determined by the Chairman or Chief Financial Officer; 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 Chairman 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 consistent with interest rate and other risk considerations;**

**NOW, THEREFORE, BE IT RESOLVED BY THE TRUSTEES OF THE LONG ISLAND POWER AUTHORITY, AS FOLLOWS:**

**1. The Eleventh 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 Chairman of the Authority is hereby authorized to deliver the Eleventh Supplemental General Resolution to The Bank of New York, as the Trustee for the Bonds, with such amendments, supplements, changes, insertions and omissions thereto as may be approved by the Chairman, which amendments, supplements, insertions and omissions shall be deemed to be part of such resolution as approved and adopted hereby.**

**2. The Chairman and the Chief Financial Officer of the Authority are, and each of them hereby is, authorized to sell all Bonds issued pursuant to the Eleventh Supplemental General Resolution either on a negotiated basis (i) to one or more underwriters for resale to investors or (ii) by private placement to one or more investors at such price or prices as they shall determine to be the most cost effective and advantageous for the Authority.**

**3. Each Authorized Representative (as defined in the General Resolution) is hereby authorized with respect to each series of the Refunding Bonds, to execute and deliver a Bond Purchase Agreement (as defined in the Eleventh Supplemental General Resolution) 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 2006E, with such modifications thereto as any Authorized Representative of the Authority, upon the advice of counsel to the Authority, approves, which approval shall be conclusively evidenced by the execution thereof by such Authorized Representative.**

**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, the issuance, sale and delivery of the Refunding Bonds and for implementing the terms of each Bond Purchase Agreement, and the transactions contemplated thereby, the Eleventh Supplemental General Resolution and this resolution.**

**5. The Chairman and the Chief Financial Officer of the Authority are, and each of them hereby is, authorized to enter into interest rate swap agreements relating to the Refunding Bonds or the Specified Bonds with such Qualified Counterparties (as defined in the General Bond Resolution) as such officers may select in accordance with the Guidelines, which agreements shall (i) relate to a notional amount of not more than \$650,000,000 in the aggregate, provided that, in applying such aggregate limit, basis swaps entered into in connection with or after entering into other interest rate swaps shall not be taken into account, (ii) commence on such date or dates as the Chairman or Chief Financial Officer specifies, (iii) have a term ending on or prior to the anticipated final maturity of**

the bonds to which they relate, as the Chairman or Chief Financial Officer specifies, (iv) provide for payments to the Authority determined based upon such index, formula or method as may be approved by the Chairman or Chief Financial Officer, and (v) 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 Chairman's memo submitted to the Trustees relating thereto 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.

6. As and to the extent that Refunding Bonds are issued for the purpose of refunding Specified Bonds with respect to which there are existing interest rate exchange agreements, the Chairman and the Chief Financial Officer of the Authority are, and each of them hereby is, authorized to allocate such interest rate swap agreements to such other outstanding Authority bonds 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 exchange agreements or to minimize the cost associated with the refunding.

7. Each Authorized Representative (as defined in the General Bond Resolution) is hereby 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 the proposed interest rate swap agreements and this resolution and each of the documents authorized thereby and hereby.

8. This resolution shall take effect immediately.

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Chairman Kessel stated that he wishes to recognize Mr. Michael Faltischek, who is present. The Chairman continued that Mr. Faltischek is a former Trustee

of LIPA, who served for many years. He indicated that Mr. Faltischek did an outstanding job, and he welcomes him.

Chairman Kessel stated that the next item on the agenda is Board consideration of a resolution to approve an addition to LIPA's Tariff for Electric Service to allow for the net energy metering of qualifying residential and Farm Service wind electric generating equipment. The Chairman continued that this Tariff is being made consistent with the new Public Service Law, Section 66-1, regarding wind generating systems and net energy metering. He added that the proposal recommends the approval of an addition to LIPA's Tariff in order to allow for the net energy metering of qualified Residential and Farm Service wind electric generating equipment.

Chairman Kessel stated that as previously indicated the New York State Public Service Law was amended to provide for the net energy metering for residential customers having wind electric generating equipment with a total rated capacity of not more than 25 kilowatts and for farm service customers having total rated capacity of not more than 125 kilowatts. The Chairman continued that LIPA wants to encourage wind generation, which is limited. He indicated that not many homes have working windmills and many of the farms that do are part of LIPA's Demonstration Program in conjunction with the Long Island Farm Bureau.

Chairman Kessel stated that LIPA strongly supports wind generation and net metering, and LIPA already has net metering for 750 photovoltaic systems.

The Chairman indicated that this policy carries out LIPA's own policy and the State-directed policy of implementing the net metering laws. He added that it has a negligible impact on LIPA's revenues, due to the fact that there are few windmills.

Chairman Kessel stated that notice was published in the State Register on August 2, 2006, and LIPA held two public hearings on September 19, 2006. The Chairman continued that the public was given the opportunity to submit written comments by September 26, 2006, but LIPA received none.

Chairman Kessel stated that it makes sense to have net metering for those individuals and farms, where there is potential. He added that it is good for the environment.

Trustee Fabio asked whether LIPA has any sense of what the demand is or what the need is for the 9600 kW limitation. Mr. Germano answered that LIPA does not expect that demand will be high and LIPA projects that only one farm will take it up in the next four years.

Trustee Affrunti asked whether the limitation is statutory. Mr. Germano responded that it is consistent with the law, in that it is .2 percent of the overall generation capacity.

Trustee Affrunti asked if LIPA reserves the right to adjust the amount of the limitation, should the demand materialize. Mr. Germano answered, "Yes, we do."

Chairman Kessel stated that windmills are bulkier and more difficult to construct than a solar roof, but one of the things that he hopes will be looked at in the future are the same kind of tax breaks for residential and farm wind projects as currently exist for solar energy projects.

Chairman Kessel stated that LIPA recently dedicated the 750<sup>th</sup> solar roof in LIPA's service area, which did not get a lot of attention, but the truth is that LIPA is one of the leading municipal utilities in the country in this area. The Chairman noted that metering is helpful, but the tax breaks and LIPA rebates cut the price of the system almost in half. He added that he hopes that the same kind of policy will be adopted for wind.

Trustee Affrunti stated that he recently read an article concerning the next advancement of technology in windmills for residential properties, and that the heads are now designed with the capability to generate much more power with less noise. Chairman Kessel stated "You're right".

Trustee Affrunti stated that 50 foot windmills are not appropriate for residential neighborhoods. Chairman Kessel agreed, and he indicated that technology is advancing.

Chairman Kessel stated that in many parts of Long Island, it is difficult to site windmills. The Chairman continued that it is important to encourage it through net metering. He added that LIPA recently met with Mr. Joseph Gergela,

the head of the Long Island Farm Bureau, and there are now several windmills on farms out in the East End.

Deputy Chairman Foye asked whether the resolution would have any effect on the pending offshore wind projects, and whether it would foreclose any option LIPA may have with respect to those projects. Mr. Germano answered that this has no impact on the proposed wind farm at all.

Upon motion duly made and seconded, the following motion was approved unanimously:

#### **787. APPROVAL OF TARIFF REVISION FOR WIND NET METERING**

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**WHEREAS, New York State enacted a law amending New York State Public Service Law (PSL) section 66-1, which was signed into law by Governor Pataki on September 14, 2004, and which provides for net energy metering for Residential Customers having wind electric generating equipment with a total rated capacity of not more than 25 kilowatts (kW) and for Farm Service Customers having wind electric generating equipment with a total rated capacity of not more than 125 kW; and**

**WHEREAS, the new law also amended Section 1020-g of the Public Authorities Law to provide that LIPA shall have the specific power to implement programs and policies designed to provide for the interconnection of wind electric generating equipment owned or operated by Customer-generators and for net energy metering consistent with PSL section 66-1; and**

**WHEREAS, LIPA issued a Proposal to allow for the net energy metering of qualifying Residential and Farm Service wind electric generating equipment and to modify the existing language in the tariff on solar net metering to combine solar and wind net metering under a new section; and**

**WHEREAS, following Public Notice in the State Register on August 2, 2006, two public hearings were held on the Proposal on September 19, 2006; the public was afforded the opportunity to submit written comments; no members of the public offered comments regarding the Proposal at the hearings, and no other public comments on the Proposal have been received by the Authority; and the time period for submitting public comments has expired; and**

**WHEREAS, for the reasons set forth in the preceding Memorandum, the Proposal is in the public interest;**

**NOW, THEREFORE, BE IT RESOLVED, that for the reasons set forth herein and in the preceding Memorandum, the Proposal is hereby adopted and approved; and be it further**

**RESOLVED, that the attached Tariff Leaves reflecting our action herein are approved.**

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**Chairman Kessel stated that the next item on the agenda is Board consideration of a resolution approving the revision to LIPA's Tariff to allow customers who participate in LIPA's Long Island Choice (LI Choice) Program to be eligible to participate in LIPA's Green Choice Program. The Chairman continued that the Green Choice Program is currently not available to LI Choice customers, because the energy service companies that participate in the LI Choice Program perform their own commodity billing.**

**Chairman Kessel stated that the LI Choice customers who voluntarily chose to participate in the Green Choice Program will pay their normal delivery charges to LIPA plus the green market charges for its sale of green attributes. The Chairman continued that there will be no revenue impact on LIPA.**

**Chairman Kessel stated that public notice was published in the State Register on August 2, 2006, and two public hearings were held on September 19, 2006. The Chairman continued that the public was given an opportunity to submit written comments until September 26, 2006, but no public comments were received. He added that all the proposal does is allow people who are LI Choice**

customers to voluntarily participate in the Green Choice Program, and he urges the adoption of this proposal.

Trustee Auerbach asked if this refers to people that use ESCO'S. Chairman Kessel answered, "Yes, correct".

Upon motion duly made and seconded, the following resolution was approved unanimously:

**788. APPROVAL OF TARIFF REVISION TO THE LIPA GREEN CHOICE PROGRAM**

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**WHEREAS, the Long Island Power Authority ("Authority") administers the LIPA Green Choice Program, which designed to foster the growth of "Green Power" generated from renewable energy resources in the State; and which operates by encouraging eligible "Green Marketers" to sell "environmental attributes" of Green Power to LIPA's customers; and**

**WHEREAS, LIPA's Long Island Choice program ("LI Choice") customers are currently ineligible to participate in the LIPA Green Choice Program; and**

**WHEREAS, LIPA issued a Proposal to allow LI Choice customers to be eligible to participate in the LIPA Green Choice Program; and**

**WHEREAS, following Public Notice in the State Register on August 2, 2006, two public hearings were held on the Proposal on September 19, 2006; the public was afforded the opportunity to submit written comments; no members of the public offered comments regarding the Proposal at the hearings, and no other public comments on the Proposal have been received by the Authority; and the time period for submitting public comments has expired; and**

**WHEREAS, for the reasons set forth in the preceding Memorandum, the Proposal is in the public interest;**

**NOW, THEREFORE, BE IT RESOLVED, that for the reasons set forth herein and in the preceding Memorandum, the Proposal is hereby adopted and approved; and be it further**

**RESOLVED, that the attached Tariff Leaf reflecting our action herein is approved.**

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**Chairman Kessel requested that Mr. Hervey offer a presentation concerning Storm Hardening.**

**Chairman Kessel stated that approximately one year ago, following Hurricane Katrina and Rita, he and other LIPA staff went to see some of the crews that LIPA released to New Orleans and also to inspect the storm damage. The Chairman continued that the crews were there for months, and they did a great job. He added that they observed a staging area for the crews, and they noticed that there was a lot of confusion.**

**Chairman Kessel stated he and the LIPA staff made a decision at that time that it was necessary to take a hard look at LIPA's system and its vulnerability to a Category 3 type hurricane that might impact Long Island. The Chairman continued that he asked Mr. Hulkower, Mr. Hervey and some of LIPA's consultants to work together on this project to look at a way to harden the electric system to make it more resilient. He added that as this was being completed LIPA saw the experience this summer in Queens in Astoria where underground feeders in the Queens networks caused people in the middle of Queens to be without power for up to ten days.**

Chairman Kessel stated that he asked Mr. Hulkower and Mr. Hervey to investigate LIPA's vulnerabilities to a similar catastrophe. The Chairman continued that as a result, a report was prepared separate from but coordinated with LIPA's storm hardening report. He indicated that he has asked Mr. Hulkower and Mr. Hervey to present their conclusions that LIPA will incorporate into its future capital budgets to harden the electric system.

Chairman Kessel stated that it is a half-billion dollar, \$25 million per year, 20-year program to harden the electric system to make it more resilient.

Chairman Kessel stated that this is something that Long Island has never done before, and it is something that many utilities do not do on a coordinated basis. The Chairman continued that rather than looking at this piecemeal, LIPA decided to pull it together in this report. He thanked Mr. Hulkower and Mr. Hervey for their extraordinary work on this advanced plan.

Mr. Hervey thanked Chairman Kessel and the board for the opportunity to discuss the matter. He reported that this was a very large project involving LIPA's staff, consultants and the KeySpan workforce. He indicated that through this process, LIPA looked at the best practices in the Gulf States and in many city and metropolitan utilities.

Mr. Hervey reported that LIPA synthesized all of the information and put it together in a way that made the best sense for LIPA's customers. He continued that LIPA looked at the vulnerabilities to large storms and the vulnerabilities to

other system events, which the report addresses together as vulnerability hardening.

Mr. Hervey reported that with respect to the storm study, LIPA had several sit-down meetings at a high level of management after Hurricane Katrina. He continued that LIPA began almost immediately to put several actions in place, before the study was concluded. He added that LIPA looked at the vulnerability to services and outages, restoration in very large storms, and the effective actions that LIPA could take to improve the T&D system's durability and resilience and the resulting expenditure.

Mr. Hervey indicated that in all of Long Island's history and to the extent known for most utilities in the area, there is no storm hurricane design criteria. He further indicated that LIPA will be one of the first to put this policy into effect.

Mr. Hervey reported that a Category 3 Hurricane could flood much of the South Shore, North to Montauk Highway. He continued that as a result of this population in that area, LIPA's facilities have developed there, and LIPA has several substations in that area as well. He added that the storm surge may be as little as a few feet, or as much as twelve to fifteen feet in some of those areas, and going forward, LIPA will address this.

Mr. Hervey reported that the North and South forks are extremely vulnerable to over-wash and to damage from storm surge, and LIPA will have to take special precautions there. He continued that LIPA will also look at the effect of flying debris, which could cause extensive damage to LIPA's lines and

facilities. He added the LIPA must also consider access throughout Long Island after a major storm, which may be hampered, and which will eliminate LIPA's ability to get crews from the outside and to get material delivered.

Mr. Hervey reported that KeySpan spent a lot of time on LIPA's behalf speaking with the Florida utilities to learn what they do overall. He continued that those utilities do an exceptional job in handling thousands of crews in such an event, and LIPA has learned from that and implemented changes. He added that LIPA looked at durability, resilience and restoration concerning a Category 3 hurricane.

Mr. Hervey reported that it is an extensive undertaking to retrofit the system to try to mitigate storm problems, and LIPA cannot come up with a design that will eliminate storm damage. He indicated that LIPA can significantly mitigate the damage and, therefore, decrease the restoration time. He added that because this is such a significant effort, LIPA estimates that it would take approximately twenty years to fully implement these changes.

Mr. Hervey reported that as a result of the issues in New York City LIPA first looked at the vulnerabilities to underground networks, and LIPA then quickly decided to look at a larger scope of problems. He continued that LIPA looked at all of the major metropolitan electrical system disruptions within the past ten to fifteen years. He added that LIPA also looked at some more recent disruptions that happened this summer in various areas.

Mr. Hervey reported that LIPA wanted to make sure that it had taken all the lessons learned that those disruptions had produced, and that LIPA had implemented the solutions. He indicated that LIPA wanted to study the potential for widespread outages of the type experienced by the residents in Queens where a large number of people would not have the ability to recover within twenty-four hours. He added that LIPA wanted to look at the vulnerabilities of underground lines generally, and in the peninsulas of Long Island, the North and South Fork and the Rockaway area.

Mr. Hervey reported that LIPA also wanted to look at its outage detection and restoration practices, which was an issue in New York City. He further indicated that LIPA wanted to look at its communication practices during outages. He noted that LIPA customers faced relatively few of the risks of the magnitude that occurred in New York City, primarily due to the evolution of LIPA's system, and due to the fact that there are not large blocks of customers served by single-wire systems.

Mr. Hervey reported that LIPA learned that it should have a design criteria where LIPA actively limits the exposure of customers to failure or large events. He continued that over the past few years LIPA has addressed nearly all of the underground networks on Long Island, and proactively upgraded them. He indicated that there are a few areas where LIPA has to go back and do that still.

Mr. Hervey reported that LIPA will now break up its underground networks into smaller portions, so that at any one time, only about a thousand or fewer will

be will be affected. He continued that it reduces the exposure to only those customers.

Deputy Chairman Steinberg asked whether there is a larger message here for the public on undergrounding, since the perception is that undergrounding is significantly more reliable than using overhead power lines. Mr. Hervey answered that LIPA learned from its discussions with the Gulf State utilities that during hurricane events and during surge events, the underground areas are very susceptible to damage. He continued that in the Gulf States during the past few hurricanes, the underground facilities in the surge area were severely damaged to the point of being unusable. He indicated that this happens when a wave of saltwater comes ashore and gets into the equipment, and sometimes it rips the surface mounted equipment off of the cable, or it occurs when the cable itself in the facility is undermined or just flushed away.

Mr. Hervey stated that on a good day underground facilities take approximately six times longer to restore for the same type of outage than overhead facilities do, although there is a longer time between interruptions. He continued that once there is a massive underground area, such as in New York City, those restoration times compound themselves. He added that there is always a tradeoff between the number of outages and time to restore, and that trade off hits home very pointedly in the storm surge areas.

Deputy Chairman Steinberg stated in the discussions that he has heard about the alternatives, this has not been brought home as strongly as it needs to be, and he urges that those risks be made clear to the public.

Mr. Hervey reported that one of the conclusions of the study is that in the storm surge areas LIPA needs to look for better technology alternatives to undergrounding. He continued that this is a clear message that underground systems are completely devastated in these types of events.

Mr. Hervey reported that LIPA has approximately 27 underground networks, and all of them combined feed only about 6,500 customers. He continued that overall LIPA has about 40 percent of its facilities underground, but this is a specific technology that is used in commercial areas and high density metropolitan areas. He added that LIPA's largest areas of exposure are the Hempstead network, which covers approximately 2,000 customers, and the Rockaway network which covers approximately 779 customers, and both networks have been extensively renovated.

Mr. Hervey reported that both studies roll up to the three major points of durability, resilience and restoration. He continued that with respect to durability, LIPA is looking for those things it can do to harden the system, such as using stronger construction standards, and using a design that will better withstand the wind and water damage. He indicated that damage will always occur, but LIPA can do those things that will lessen the damage.

Mr. Hervey reported that the second major item is resilience, which basically concerns LIPA's ability to reswitch and reconfigure the system in the event of a storm. He continued that LIPA already has one of the leading automated distribution systems in the nation. He indicated that LIPA will leverage that automation to give more resilience to the system.

Mr. Hervey stated that the third item is restoration, which concerns the way in which LIPA recovers, and LIPA has put into place several items. He continued that LIPA now has a plan in place, which is the first of its kind on Long Island, and in the event of a very large storm, LIPA will be able to request up to 4,000 crews within one to two days. He added that LIPA will be able to house and feed all of those crews and keep the material flowing.

Mr. Hervey stated that LIPA looked at how it can reconfigure substations to avoid equipment damage from high winds. He continued that LIPA also examined things that LIPA can do to avoid it, such as inventory, spare parts and work practices. He added that the process included a cost analysis.

Mr. Hervey reported that LIPA is in the process of winding down a few planned replacement programs that provide a source of funds and which will decrease some of the normal spending that LIPA has to do on storms. He continued that LIPA does not know what those savings might be on future storm costs, but some savings are anticipated. He added that LIPA is going to attempt to manage this program as best as it can, so that even in the long range, it has little or no impact.

Mr. Hervey reported that LIPA has begun to change design standards for its T&D system so that going forward, new facilities will conform to this higher wind standard. He continued that LIPA's existing standards are primarily driven by ice loading standards, which is normal and typical for a utility. He added that the ice loading standards for small ice storms have LIPA designing for a construction to withstand approximately 80 to 100 m.p.h winds without any intervening factors, and LIPA is raising the standard to approximately 120 to 130 m.p.h.

Mr. Hervey reported that LIPA can begin some high value work in 2007, including increasing the tree removal program above and beyond LIPA's tree trim cycle. He continued that LIPA will also begin an assessment of substation surge zones. He indicated that this effort will take several years to protect those substations, which are often built in highly populated areas with very little space around them.

Mr. Hervey reported that LIPA will also begin the wind hardening of its substations meaning protecting the substations from having material and equipment blow into the electrical system and protecting LIPA's command and control systems. He indicated that this is very important because the repair of substations can take a long time. He added that LIPA has begun a multiyear process of hardening the critical distribution equipment, including automated systems.

Mr. Hervey reported that another area that LIPA seeks to harden is the transportation network, meaning that wherever LIPA's lines cross transportation routes, restricted access highways and the Long Island Railroad, LIPA wants to harden the system on those crossings so that the wind event itself does not cause the lines to come down across those transportation infrastructure. He continued that this may cause delay in getting material and manpower and also cause other community events.

Mr. Hervey stated that if a large storm is expected and LIPA anticipates that restoration may go longer than five days, LIPA will know immediately to gear up its new logistics process and immediately ramp up its workforce. He indicated that the logistics process is very unique on the East Coast and in the Northeast.

Chairman Kessel asked whether under the logistics program, a private contractor would come in and set up shop, as opposed to LIPA performing all of the logistics functions. Mr. Hervey answered that after watching the progress of a hurricane one or two days prior to the hit, LIPA would choose to activate up an experienced contractor, who would pre-position himself in an adjacent state out of the storm area. He continued that the contractors have the ability to set up the necessary facilities in an area where LIPA could count on them. He noted that LIPA's previous plan relied upon finding space, where LIPA would be competing with the public for basic care infrastructure.

Deputy Chairman Foye stated that this has been a high quality report. He asked what the role of KeySpan is, and what the allocation and responsibilities

between LIPA and KeySpan is so that there is clarity as to the division of labor and so that there is not a misleading message to the public that LIPA is doing all of this.

Mr. Hervey answered that as owner of the electric T&D system, one of the chief things that LIPA must set is the policy, and the carrying out of that policy is nearly all KeySpan work. He continued that KeySpan is actively working on that and they have worked to produce the policy with LIPA. He indicated that LIPA relies heavily on KeySpan with respect to the transmission and distribution operation, and they will arrange for the logistics, design changes, and to carry out the actual restorations and the capital program.

Deputy Chairman Foye asked whether this is also a program summary, because it is in the nature of a policy. Mr. Hervey responded, "Right". He continued that this is really a program that lines beyond any relationship that LIPA has with KeySpan or any future manager.

Deputy Chairman Foye asked whether there is any way to accelerate the 20-year program, because emergency preparedness has been a priority for LIPA under Chairman Kessel, and LIPA has been fortunate to date. Mr. Hervey answered that LIPA would look for opportunities to do that. He continued that LIPA has chosen a funding level and time frame that will not foreseeably affect rates, and if LIPA can do work less expensively and achieve synergy savings, LIPA will do that.

Chairman Kessel stated that while KeySpan does the work, LIPA runs the emergency response, and LIPA without a doubt, makes the policy decisions and is physically present to run the operations. The Chairman continued that KeySpan does a great job, but under LIPA's direction. He added that he would not leave this to any private company to do on its own, because a private company has other considerations that LIPA does not have.

Chairman Kessel stated that it is important that LIPA be a hands-on owner of the system, particularly since LIPA will get the blame when there is an emergency. The Chairman continued that the relationship between LIPA and KeySpan is terrific, and he commends Mr. Hulkower, Mr. Hervey, Mr. Cunningham, Mr. Davidson and the LIPA and KeySpan team who directed the response to the Labor Day weekend storm. He added that one of the key criteria going forward and concerning the proposed National Grid acquisition of KeySpan is that LIPA's performance must be maintained at current levels, if not better, in the emergency response area.

Mr. Hervey stated that in further response Deputy Chairman Foye's question, LIPA will prioritize items to get the biggest bang items out of the process quicker.

Trustee Affrunti stated that he commends Mr. Hervey and Mr. Hulkower for the terrific report and for their foresight to ensure that LIPA's T&D system is the best that it can be. He continued that this is a tribute to the terrific team that LIPA has, and the direction of effort, time and energy to this project.

Trustee Affrunti asked how the recommendations in the report impact the capital budget. Mr. Hervey answered that LIPA has identified approximately \$25 million per year in expenditures, which he does not expect to be constant each year. He continued that approximately \$20 million of the \$25 million capital, with approximately \$5 million O&M, which will pay for the additional works that KeySpan is to do.

Mr. Hervey stated that LIPA will work quite a bit of the work into its regular work plan, so that LIPA will see synergies. He indicated that LIPA will try to manage this so that it does not increase the capital budget.

Trustee Affrunti asked whether there is a specific timetable concerning what will be targeted. Mr. Hervey responded that right now LIPA has basically a one to two year plan, with the balance of the plan to be created in year one as LIPA gains experience. He indicated that there will often be very complex projects to take in, which will be tantamount to changing out the engines in an airplane, while the airplane is in flight, so LIPA must be careful.

Trustee Affrunti asked whether LIPA still uses wood poles, or whether LIPA switched to another substance for new poles that would improve durability. Mr. Hervey responded that LIPA is part of research and development efforts in this area within the industry, but for wood poles, what is important is how you treat them and how often you inspect them. He continued that for transmission, LIPA will be going to a steel pole technology almost exclusively, which has a much

longer life, but wood poles are used on roadways because they have a certain breakaway capability in the event of a car accident.

Trustee Affrunti asked if satellite photographs can be used to assist in assessing damage. Mr. Hervey answered that LIPA has looked into ways to do this, although there is no commercially available way to do this at this time.

Chairman Kessel entertained a motion to adjourn. Upon motion duly made and seconded, the Board voted unanimously to adjourn the meeting at 12:27 p.m.

Respectfully submitted,

Stanley B. Klimberg